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IN SUPPORT OF DESERT STORM:
OPERATION TEAM BUILDER

BY

LIEUTENANT COLONEL RANDOLPH O. BUCK
United States Army

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**IN SUPPORT OF DESERT STORM: OPERATION TEAM BUILDER
AN INDIVIDUAL STUDY PROJECT**

by

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ABSTRACT

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This is a Desert Storm Personal Experience Monograph. Operation Team Builder, executed by the 589th Engineer Battalion (commanded at the time by the author) at Fort Leonard Wood, Missouri, in January 1991, entailed the formation, specialized training (focusing on mechanized combat engineer mobility support during offensive actions), and deployment to Southwest Asia of five combat engineer package platoons. Key aspects of Operation Team Builder are addressed, including formulation and resourcing of the training plan, assimilation of platoon cadre and members, conduct of training, logistical and personnel challenges, and deployment activities. Selected observations and lessons learned applicable at Department of the Army-level are presented.

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PROLOGUE

The 589th Engineer Battalion, stationed at Fort Leonard Wood, Missouri, was a Training and Doctrine Command (TRADOC) One Station Unit Training (OSUT) organization assigned to the 1st Engineer Brigade. Lieutenant Colonel Randolph O. Buck commanded the battalion from 12 July 1989 to 12 July 1991.

The battalion consisted of three OSUT training companies, each composed of a 25-man cadre and capable of training 180 engineer soldiers (holding Military Occupation Specialties 12B, 12C, and 12F) per 13-week OSUT cycle; the Sapper Leader Detachment, a 30-man element responsible for conducting the 4-week Sapper Leader Course ten times a year for commissioned and noncommissioned engineer leaders from engineer units world-wide; the Combat Engineer Training Committee (CETC), a 100-man element responsible for providing training in combat engineer demolitions, mine warfare, and bridging; and a 40-man maintenance section responsible for maintaining a large fleet of mostly high-mobility, multipurpose wheeled vehicles (HMMWV), dump trucks, and M113-series armored personnel carriers (APCs).

On 6 August 1990, four days after Iraq's invasion of Kuwait, President Bush ordered the first U.S. forces to the Gulf region; Operation Desert Shield was born. At Fort Leonard Wood, little thought was initially given at unit-level to the situation developing "over there." The training of engineer soldiers, routinely viewed as a serious undertaking by the post's training cadre, hardly missed a beat.

In mid-September, Fort Leonard Wood and many other TRADOC installations began receiving levies for individual "filler" personnel in support of Desert Storm. The 589th Engineer Battalion quickly found itself losing personnel, of various grades and MOSs, to these levies. The gravity of the situation in the Gulf began to dawn progressively on many of the cadre at Fort Leonard Wood; new-found interest in powers of attorney, wills, and various financial arrangements for family members arose among these soldiers. The troops in training, however, remained largely shielded from the events of the day; for them, the training at hand was their concern.

On 8 November 1990, President Bush ordered an additional 150,000 troops to the Gulf region (to augment the 230,000 already there) and stated this augmentation was intended "to give the multinational force an 'offensive military option.'"¹ This development, plus the steadily increasing personnel and equipment levies on the training base, created an increased sense of purpose among the training units assigned to Fort Leonard Wood.

The arrival of 1991 found the 589th facing three significant developments. First, in accord with the post's annual training plan, the battalion received three companies of brand new trainees, the vast majority quite concerned about the developments in the Gulf. Interestingly enough, the "show rate" for this group was in the mid-nineties, about ten percent higher than the typical show rate. This fact, in the face of the

worsening situation in the Gulf, said something about the aggregate character of this group of trainees. The challenge for the training cadre throughout the cycle was keeping the trainees' minds on the training at hand and not allowing them to fret too much about international developments.

Second, most of the 25-man Sapper Leader Detachment (SLD), on a scheduled training cycle break, was deployed on short notice the first week of January 1991 to Fort Benning to complete a classified training facility for the Special Forces (this project had sat idle after the engineer battalion assigned the job had been deployed to the Gulf). All that remained of the SLD at Fort Leonard Wood was the detachment's commander, First Lieutenant Jeff Harrison, and his small orderly room and support staff.

Third, the battalion had lost about 20 percent of its training cadre to the aforementioned Desert Shield-related levies. To compensate, the battalion's training committees went on a six-day a week training schedule, with day-to-day facility upkeep and cross-training programs placed in abeyance. The battalion's short-handed maintenance section, on the other hand, was experiencing a lighter work load, as the availability of spare parts had almost dried up (as a result of Desert Shield demands); additionally, the battalion's on-post priority for direct support work had taken a back seat to the multitude of Forces Command (FORSCOM) units on Fort Leonard Wood being prepared for movement overseas. As a result, the battalion's readiness rate was steadily dropping (normally in the mid-

nineties, it was already in the seventies and heading lower).

About 7 January 1992, Lieutenant Colonel Buck pointed out to the brigade commander, Colonel William Harvey, that the quality of Engineer OSUT training would soon start to suffer if the drain on the battalion's personnel assets was not abated. Colonel Harvey acknowledged the commander's concerns, suggested a couple of temporary, stop-gap fixes, and concluded by cautioning that things would probably become even busier if the Gulf situation didn't soon improve. Little did the battalion commander know just how busy, and exciting, things would become for the 589th Engineer Battalion.

WARNING ORDER

On 11 January 1991, following a late afternoon ceremony in the post field house, Lieutenant Colonel Buck was summoned to a corner of the building to huddle with his brigade commander, Colonel Harvey; the brigade's S3, Major Scott Jackson; and the post's Director for Plans, Training, and Mobilization (DPTM), Colonel Mike Morgan. Upon the battalion commander's approach, Colonel Morgan looked at Colonel Harvey and said, "Should I tell him or do you want to?"

Colonel Harvey deferred to Colonel Morgan, who proceeded to tell Lieutenant Colonel Buck that his battalion was tasked to train up five package platoons for deployment to the Gulf in very early February. The platoon leadership (platoon leaders, platoon sergeants, and squad leaders) would be drawn from cadre across

Fort Leonard Wood; the squad members would be brand new graduates of a sister OSUT battalion (the 31st Engineer Battalion). The training, which should start within a week, was to stress engineer support to mechanized offensive operations.

Colonel Morgan cautioned Lieutenant Colonel Buck to "keep it basic" and suggested such training as engineer battle drills, demolitions, caliber .50 machine gun familiarization, and survival skills. A proposed training plan, drawn up by the battalion commander and his staff, was due to the DPTM for review on Monday, 14 January. In response to the battalion commander's only question, Colonel Morgan confirmed that the APCs would be an integral part of the training program. Given that response, Lieutenant Colonel Buck requested a higher maintenance priority, both repair parts and direct support, for the battalion; Colonel Morgan replied that the 589th would go to the head of the line.

Upon returning to the battalion headquarters, Lieutenant Colonel Buck called together most of the small battalion staff and issued a verbal warning order, essentially covering everything given to him in the field house. Present at this meeting was Major David Chisholm (a British engineer exchange officer serving as the battalion's executive officer since December 1990), Captain Stan Thomas (the battalion's operations officer since August 1990 and a former company commander in the unit), Sergeant First Class Michael Robinson (the operations section NCOIC), and Sergeant First Class Ernest Penn (the battalion's personnel officer). That was the extent of the

battalion's staff (quite typical of an TRADOC OSUT battalion), save the battalion's command sergeant major (Command Sergeant Major Steven Tabone, who had gone home earlier that afternoon), a handful of lower-grade noncommissioned officers, and a couple of secretaries.

After receiving the warning order, everyone present agreed to convene the next morning. Two goals were established for that meeting: establish a command and control mechanism for the five platoons, and develop a time line of critical events and actions. Following that meeting, work would immediately start on developing the training plan. As a mark on the wall, Lieutenant Colonel Buck set the goal of having a detailed training plan formulated before going home Sunday night. Subsequently, there ensued excited and animated discussion about the mission. After a few minutes, Lieutenant Colonel Buck, citing an overloaded brain, politely cut off the conversation. He told everyone to go home, relax a bit, and jot down any thoughts about the mission that came to mind; such notes would foster conversation at the next morning's meeting. Lieutenant Colonel Buck then gathered up some references (key among these were the engineer field manual (FM) series 5-100 through 5-105 and a recently-published circular on engineer battle drills) and retired home to sort out the significant challenge that lay ahead.

After pondering things for a while that evening, Lieutenant Colonel Buck determined that a solid command and control framework for the platoons was critical to the success of the

mission. It seemed logical to him that the five platoons should fall under one company. But where would the company hierarchy come from? Quite fortuitously, the elements of the idle Sapper Leader Detachment not deployed to Fort Benning provided some critical resources-- namely First Lieutenant Harrison, his first sergeant, First Sergeant Canter, a supply sergeant, and an operations sergeant. And the company commander? First Lieutenant Harrison, as outstanding an officer as he was, was not quite ready for such an undertaking. (He would, though, make an excellent executive officer.) Maybe it was best to commit a proven talent to this task, such as Captain Thomas, the battalion's Operations Officer. But who would then run the rest of the battalion's on-going operations? That answer was found in the remarkable talents of Sergeant First Class Robinson, a truly great noncommissioned officer.

Convinced the foregoing approach was the best way (and only practical way) to effectively control the platoons, Lieutenant Colonel Buck telephoned his brigade commander and bounced these thoughts off him. Colonel Harvey readily agreed to the concept. With that issue settled, Lieutenant Colonel Buck proceeded to translate into writing what he perceived to be the mission and tasks attendant to the undertaking. The document he drafted that evening, which served as the foundation for planning and executing the operation, is at Appendix A.

INITIAL PLANNING AND PREPARATION

Saturday, 12 January 1991, found the battalion staff, the SLD staff, and key unit maintenance representatives assembled in the battalion headquarters at 0800 hrs. The battalion commander first reviewed the mission and specified and implied tasks. Then the matter of command and control of the platoons was addressed. The battalion commander, having earlier spoken privately to Captain Thomas, Sergeant First Class Robinson, and First Lieutenant Harrison about his intention, presented the plan to the group. All agreed it was the best solution to this key concern.

Another key command and control issue was raised by Major Chisholm: the need to obtain two officers, preferably captains, to serve as the battalion's S1 (responsible for personnel administration) and S4 (responsible for logistics). Given the complexity of the mission and the short time frame in which to accomplish it, there was little doubt that more horsepower than that at hand in the battalion would be required in these two functional areas. The battalion commander took on this issue personally.

With the initial meeting agenda completed, Lieutenant Colonel Buck excused himself and the staff started developing the two-week training plan. By mid-afternoon, a basic framework had been formulated, which the battalion commander reviewed and approved in short order. The training concept called for a building block methodology, starting first with various

individual skills, then progressing to squad-level skills, and culminating in a platoon-level situational training exercise (which was intended to pull together the entire two weeks of training).

The framework of the training program set, the staff proceeded to determine specific training subjects and allocate time periods. An anticipated shortage of training aids, training areas, and equipment (given the post-wide demands of Desert Storm) caused the staff to organize most of the training periods as a series of round-robin exercises. Thus, on any given day at any particular time, especially during the individual and squad-level training portions, the fifteen squads might be simultaneously engaged in fifteen different training events. Clearly, this undertaking was going to be a logistical nightmare (not to mention a command and control challenge for all the leaders).

By noon on Sunday, 13 January 1991, the proposed training program was taking shape. Major Chisholm turned his attention to developing an administrative and supply shopping list for each training event. Simultaneously, Captain Thomas began developing a flow diagram reflecting the projected daily utilization and consumption of training resources (both expendable and non-expendable items). Of course, all this effort was purely contingent (essentially constrained only by the staff's general knowledge of what training resources probably would and would not be available); not until the following day would DPTM be briefed

and initial commitments obtained concerning the allocations of training resources for this mission. Following a final review that evening by the battalion commander (who was truly impressed by what this small group of individuals had accomplished in just two days), everyone went home, feeling that a sound training plan had been assembled.

Monday morning, 14 January 1991, found the battalion commander concurrently briefing the brigade commander and the DPTM on the concept of Operation Team Builder (so named earlier that morning by Major Jackson), the proposed training plan, and the lengthy list of training resource requirements. This briefing, really a discussion and working session, served as a forum for resolving many training resource issues. Adjustments were made, a couple of training topics were eliminated, and one or two were added. But overall, the plan withstood this rigorous examination. The DPTM stated he would begin alerting the various post-level elements concerning our needs and priority; subsequently, DPTM issued an operations order (Appendix B). Additionally, the results of this meeting allowed Major Chisholm to begin fine-tuning the resource requirements package and coordinating initial needs with the brigade staff.

That afternoon, the battalion commander presented a desk-side briefing on the operation to the Commanding General of Fort Leonard Wood and the Engineer Center, Major General Daniel R. Schroeder. A copy of the briefing packet is at Appendix C. The presentation was well received; the session proved an excellent

opportunity to exchange ideas, fine-tune the training plan, and further address certain resource considerations. The battalion commander's summary of Major General Schroeder's comments is at Appendix D. Of particular interest was one of Major General Schroeder's closing remarks to Colonel Harvey and Lieutenant Colonel Buck: "Be thinking about how we might do this for 27 squads." Another mission in the offing?

While this flurry of meetings, briefings, discussions, and initial coordination sessions was occurring on Monday, 14 January, three important actions were concurrently taking place in the personnel arena. The first involved the designation of permanent party cadre to man the platoon leadership positions (platoon leaders, platoon sergeants, and squad leaders). Based on a DPTM tasker issued over the weekend, the three brigades were selecting lieutenants to fill the platoon leader positions. The criteria for the lieutenants was straightforward: each had to be a first lieutenant, an engineer, and "good." The brigade commanders were left to define the meaning of "good."

Simultaneously, the post command sergeant major, Command Sergeant Major Woodall, held a series of meetings that day with unit sergeants major and representatives of the post Adjutant General's staff; they hand-picked the five platoon sergeants and twenty-five squad leaders (plus three stand-by squad leaders) to fill those billets in the platoons. Subsequently, Command Sergeant Major personally called each selected individual himself. All the lieutenants and noncommissioned officers were

told to report to the Post Conference Room the next morning (Tuesday, 15 January 1992) for a briefing by the commanding general.

Second, Lieutenant Colonel Ralph Grieco, commander of the 31st Engineer Battalion (a sister OSUT battalion in the 1st Engineer Brigade), and his staff were engaged in selecting the combat engineer soldiers, about to graduate from their OSUT training, who would transfer to the 589th Engineer Battalion and serve as squad members in the five platoons. All these soldiers had to be Regular Army enlistees (not reservists or national guardsmen), deployable, and free of any enlistment obligations (such as station of choice, airborne school, and the like).

Thirty soldiers were required per platoon, for a total of 150 soldiers. Fifteen additional soldiers would participate as stand-by personnel, yielding a total of 165 soldiers. Many soldiers in the 31st volunteered for the mission; a number of these held enlistment guarantees to attend airborne school, which they readily waived. The difference between the large number of volunteers and the greater requirement of 165 was selected through a lottery system. The soldiers' report date to the 589th Engineer Battalion was set for Thursday, 17 January 1991; in the meantime, the cadre of the 31st would ensure that each soldier had an opportunity to notify his relatives of the dramatic change in assignment orders, had reviewed some selected, critical individual training, and was prepared to out-process from their OSUT unit.

Third, two officers, Captains Rod Diaz and Ken Wilson, were identified from another brigade for assignment to the 589th Engineer Battalion effective Wednesday, 16 January 1991. Captain Diaz would be the S1 officer; Captain Wilson would serve as the S4 officer. Lieutenant Colonel Buck was advised that both officers were "short timers"-- Captain Diaz had already submitted his resignation paperwork and Captain Wilson was considering requesting resignation (the Department of the Army's Stop-Loss program would eventually hold both resignations in abeyance until resolution of the Gulf crisis). The battalion commander, expressing the opinion that "if they can work and have two hands, who cares if they're 'short timers'," deferred to Major Chisholm; he felt the same way, sight unseen. To their credit, both officers came over that afternoon, both asked to start working immediately with the battalion (as opposed to waiting for the effective date), and both turned in sterling performances.

The final order of business for the battalion commander that day was a meeting with the battalion's three OSUT company commanders: Captains Brian Baker (Co A), Kevin Wilson (Co B), and Reni Stowell (Co C). All three officers were quite experienced; each had several OSUT cycles under his or her belt.

Lieutenant Colonel Buck stressed that while he remained responsible to them and ready to assist in any way, he would, of necessity, be spending the majority of his time on Operation Team Builder. Furthermore, with Captain Thomas consumed by the operation, they would find themselves dealing almost exclusively

with Sergeant First Class Robinson on operations matters. As the battalion commander expected, the three were unanimous in voicing their support of Sergeant First Class Robinson and equally unanimous in expressing their pleasure over the fact that Lieutenant Colonel Buck would not be around much to pester them in the near-term.

DELTA COMPANY GEARS UP

The formal activation of Company D, 589th Engineer Battalion, occurred the morning of 15 January 1992 in a brief ceremony at the battalion's headquarters. The company guidon, newly made by the folks in the Tent Repair Section of the maintenance activity on post, was placed on a spare guidon pole and the activation orders read. Though the ceremony lasted but a few minutes, the events contributing to the initial shaping of Delta Company extended over the period 15-18 January 1992. The most significant actions are addressed in this section, including the acquisition of the platoon cadre, transfer of the platoon members from the 31st to 589th Engineer Battalions, establishing a service support mechanism, solidifying the training schedule, establishing a family support network, and conducting a preparation for overseas movement (POM) screening.

Major General Schroeder addressed the platoon cadre on Tuesday morning, 15 January 1991. His remarks were brief, but he left no doubt that Operation Team Builder was a critical mission. He noted that each individual had been hand-picked for the job

based on his demonstrated skills, and stressed that the key to success was teamwork. Following his remarks, he entertained questions. Those assembled had only a couple of questions, the most significant (in hindsight) being why the post-level leadership had elected to not provide assistant squad leaders (in the grade of sergeant) for the mission. Command Sergeant Major Woodall responded that Fort Leonard Wood could not afford to lose many more folks, and he was certain that a number of the newly graduated privates would "rise to the surface"-- and would serve well as assistant squad leaders.

Captain Thomas then gave a thumb-nail sketch of the training plan and passed out copies of the tentative training schedule. Finally, the platoon cadre members were released for the remainder of the day, with instructions to concentrate on getting their personal affairs in order. They would convene the next morning at the battalion for a discussion session with the battalion commander, followed by a series of planning and coordination sessions with Major Chisholm, Captain Thomas and the battalion staff.

With the activation of the company, a Unit Identification Code was issued; this essentially made Operation Team Builder "real" in the eyes of the service support folks on post. Major Chisholm wasted no time in starting to solidify the myriad of logistics-related details on the battalion's "shopping list." Initially, the battalion worked through the Brigade S4 shop on all logistics matters, but very quickly it became apparent that

the Brigade S4 staff was swamped with many competing Desert Shield-related missions. Even though Operation Team Builder was the 589th Engineer Battalion's top priority, such was not necessarily the case with the Brigade S4.

Major Chisholm's early suggestion that the battalion be allowed to handle its own coordination fell on the deaf ears of the Brigade S4. By Wednesday, 16 January 1991, when Major Chisholm and Captain Wilson had actually arranged a number of logistics actions (without brigade representatives knowing), the Brigade S4 finally admitted that perhaps Operation Team Builder should be handled off-line with the 589th Engineer Battalion acting as an executive agent for the Brigade S4. Through this agreement, most logistics actions proceeded smoother and faster; when the 589th representatives did hit a snag, which occurred several times, the Brigade S4 responded immediately and cleared the way for battalion.

Matters on the personnel-side of the house generally proceeded smoother from the first day. This was probably attributable to the fact that Fort Leonard Wood's personnel management community is constantly handling large volumes of soldiers, given the constant ebb and flow of soldiers in training (as opposed to the post's logistics community, whose workload tends to be relatively light, except for periodic deployments of various on-post Table of Organization and Equipment (TOE) units. Similarly, the Brigade S1 staff seemed better able to cope with the special challenges of Operation Team Builder than did the

Brigade S4 staff. Since this was the brigade's largest personnel-related undertaking of Operation Desert Shield, the 589th Engineer Battalion generally received timely and effective assistance from the Brigade S1 staff; rarely did the battalion have to strike out on its own in the personnel arena.

Wednesday morning, 16 January 1991, found Lieutenant Colonel Buck meeting, for the first time, with the entire Operation Team Builder cadre, battalion staff and platoon cadre. Following introductions, the battalion commander reviewed the mission, discussed the broad concepts and tenants of the operation, and addressed family support concerns.

Lieutenant Colonel Buck's three recurring themes were the criticality of safety, the need for flexibility, and the importance of team work. None of these themes were flashes of brilliance; they were clearly and simply the most obvious of many challenges facing those involved in Operation Team Builder. From the battalion commander's perspective, the key to proper safety and flexibility was team work. This newly assembled group of leaders, representing three brigades and more than fifteen battalions and directorates across Fort Leonard Wood, had to work together if the mission was to succeed.

The battalion commander emphasized that the real-world mission facing the group dictated that family support would have to transcend the routines of phone rosters and quarterly social gatherings typical of family support groups at Fort Leonard Wood (and probably most other TRADOC posts, too). The importance of

each cadre member preparing his family for his possible absence was stressed; a checklist of things to be considered was passed out. A detailed briefing by the battalion commander for all interested spouses and family members was set for the following week.

After fielding a variety of questions and comments, Lieutenant Colonel Buck turned the meeting over to Major Chisholm, followed by Captain Thomas, for a detailed review of what had been accomplished and what was planned in the areas of service support and training. Most of the rest of that day and Thursday found the platoon cadre fine-tuning their training schedules, developing their lesson plans, confirming training aids and areas, assuming coordination responsibilities from the battalion staff for various training events, and the like.

As Wednesday wound down, the battalion commander was struck by the surreal feeling in the battalion. It was perhaps best seen that day in the eyes of many of the twenty-five commissioned and noncommissioned leaders who had been brought together to execute Operation Team Builder-- a demeanor conveying "This will never happen; we'll jump through our butts for a few days and it will be cancelled." Even the battalion commander found it hard to believe that Desert Shield had gone on as long as it had, that the United Nations was holding the line, and that Saddam was acting as seemingly irrational as he was.

Much of the uncertainty about the viability of Operation Team Builder was dispelled that evening when, at about 1800 hrs,

CNN (monitored in Sergeant First Class Robinson's shop) broadcast that the United States and coalition air forces were bombing Baghdad. Operation Desert Shield then became Operation Desert Storm. Operation Team Builder, in high gear since 12 January, shifted into overdrive.

Thursday, 17 January 1991, was devoted to a myriad of activities associated with preparing for the receipt of the soldiers from the 31st Engineer Battalion (the first eighty would transfer to the battalion that evening). Squad leaders rehearsed their first training sessions. The motor pool hummed with activity as long-awaited repair parts arrived. And members of the battalion staff worked the inevitable last-minute administrative crises.

Friday, 18 January 1991, found the remainder of the soldiers from the 31st Engineer Battalion (now 164 strong, as one individual had absented himself without leave just before the transfer) reporting to their new unit immediately after breakfast. Following the designation of final platoon and squad assignments, all attended a command briefing presented by Lieutenant Colonel Buck. Their morale was sky high! The battalion commander presented an update on the Gulf situation, outlined the mission of Operation Team Builder, stressed the importance of safety, and emphasized the value of teamwork. Captain Thomas then presented an overview of the training plan and addressed key personnel and supply issues. Finally, the soldiers were turned over to their platoon cadre for detailed

discussions of the planned training. Later in the morning, all proceeded through the post's Preparation for Overseas Movement (POM) screening. Training started that afternoon.

The mood of the soldiers that first night communicated largely anxious anticipation. The POM, in retrospect, not only accomplished the necessary administrative processing for deployment but also served to put the soldiers in a frame of mind that proved quite receptive to the intensive training scheduled during the next two weeks. Completing the POM was clearly a significant step towards possible deployment. A second factor which served to heighten the warrior spirit in the group was the receipt, that evening, of a M16A2 rifle by each soldier. Forget the abused and overly-used M16A1s carried and fired during initial training. Here, for each soldier, was a virtually new rifle he would take into combat, if deployed!

TRAINING CHALLENGES

Training of the five platoons commenced the afternoon of Friday, 18 January 1991. Appendix E contains a copy of the approved training schedule covering 18-29 January 1991. About ninety-five percent of the training programmed and depicted on the schedule was accomplished, though there was some rearranging due to last-minute resource difficulties, and weather interruptions.

This paper will not describe in minute detail the training undertaken during Operation Team Builder. Rather, key highlights

and special aspects of the training program are addressed, including training methodology, platoon leadership, safety, inclement weather, OSUT graduation ceremonies, and selected training events.

Training Methodology. The training methodology was simple and straight forward: virtually everything was accomplished using a crawl-walk-run approach, with ample practice at each level of effort. The intent of this approach was to refresh the soldiers' minds (by reviewing and practicing key OSUT training subjects), increase their proficiency (by addressing training topics not covered during the OSUT cycle), and (perhaps most importantly) build the confidence of the leaders and platoon members alike, thus fostering the formation of teamwork. Wherever possible, the platoon cadre took the lead in presenting the training to their respective charges; committee training was kept to the absolute minimum (frequently at the expense of efficiency, but to the benefit of unit cohesion).

Platoon Leadership. By and large, the platoon leadership rose to the occasion and did a superb job of training up their respective platoons. Surprisingly, though, a couple of the platoon cadre initially exhibited an inclination to spend more time on administrative chores and rely upon the back-up committees to conduct portions of the training of their squads and platoons for them. Several training days elapsed before the last recalcitrant among them got with the program; peer pressure from fellow platoon cadre, whose squads and platoons were

generally flourishing, had the most positive effect on these individuals.

One platoon leadership weakness never overcome was the lack of assistant squad leaders. By and large, junior leaders did not rise from the ranks as had been hoped and predicted. Some privates gave it their best shot, but ultimately it came down to their simple lack of experience; they could not handle the multitude of concurrent requirements and responsibilities. Additionally, their fellow privates generally preferred to take their orders from someone with experience.

Safety. Operation Team Builder was fertile ground for numerous accidents, given the crunch of time, the pressure of possible deployment, and the general lack of cohesion within each platoon early in the operation. A stringent safety program, coupled with a fair amount of luck, allowed the operation to be completed with but one accident of any significance, which resulted in only minor vehicular damage.

A number of tools from the battalion's safety kit bag were employed; essentially, what had been done for many months during peacetime was replicated for this war time undertaking. Every day began with platoon-level safety briefs and concluded with safety after-action critiques. On-going risk assessments were accomplished at both battalion-level and platoon-level; results were compared and discussed in leader forums before the start of each training period. The post's Safety Office directed much of its attention to the battalion's training during the operation,

thus providing extra eyes on site.

Weather. The weather was less than helpful during the early stages of Operation Team Builder-- an ice storm struck and deposited about one inch of ice across southern Missouri, including Fort Leonard Wood. This storm forced the battalion and platoons to jockey some training, moving more indoors than had been originally intended. Due to lack of time, the battalion had not considered developing any form of inclement training plan; essentially, the cadre was caught with its pants down, which required a quick shuffling of planned training and resources. Fortunately, much of the ice melted within about three days, and the training program essentially got back on track.

OSUT Graduations. The press of time necessitated that the 164 soldiers report to the 589th before the date of their actual OSUT graduation. Indeed, because of the soldiers came from two different companies in the 31st Engineer Battalion, they actually fell into two different graduation cycles. Thus, if their completion of OSUT was to be formally recognized, arrangements would have to be made to interrupt Team Builder training for two separate graduation rehearsals, two different graduation ceremonies, and two cycles of one-night passes.

It might seem odd, at first glance, that in the face of possible deployment to a combat zone, the cadre should even consider the possibility of allowing the soldiers to take time to prepare for and attend an OSUT graduation. But those in the initial entry training business understand that the ceremony

marks a rite of passage-- it symbolizes the creation of a combat engineer. Soldiers and relatives look forward to it.

Eliminating the ceremonies was a thought that entered very few minds; it simply did not seem the right thing to do.

In retrospect, the two graduation ceremonies proved to be grand opportunities to further cohesion. Parents and other relatives turned out in record numbers to witness the events, and many expressed appreciation for the opportunity to see their soldiers before possible deployment. Each graduation period afforded Lieutenant Colonel Buck and Captain Thomas the opportunity to address the guests, explain what was happening to their soldiers, and establish an initial family support system (essentially an exchange of long-distance phone numbers and the introduction of key leaders). The time taken away from training for these occasions was, indeed, time well-spent. Unhappily, one graduation ceremony proved so overwhelming for one Team Builder soldier that he became the second, and last, individual to absent himself (with his parents, no less!) without leave from the operation.

Training Highlights. While the Operation Team Builder training program emphasized repetitive training on many basic combat engineer tasks, several training events proved to be truly special. These particularly memorable training events included leader training, live mine training, and the breaching of a complex obstacle.

a. Leader Training. The majority of leaders selected

to fill the platoon cadre positions had been away from engineer TOE units for relatively long periods of time. While they remained quite proficient in basic combat engineer tasks, their currency in the doctrine associated with the employment of engineers was not good. Additionally, few had desert experience, and most had forgotten key non-engineer skills such as call for fire techniques.

Thus, part of the Team Builder training plan included evening classes for all the leaders. This generally well-received undertaking reflected a balance between mission requirements and personal desires to be home with one's family; overall, the balance was kept fairly level. Mobility operations received the greatest emphasis, with the cadre viewing tapes of engineer units in action at the National Training Center, listening to experts from the Engineer School present the latest engineer mobility doctrine, and conducting sand table exercises. Other sessions addressed engineer reconnaissance, the engineer estimate, operations orders, use of secure communications equipment, and call-for-fire techniques.

b. Live Mine Training. Live mine training, which required each soldier to arm and disarm a live anti-tank mine, had not been conducted at Fort Leonard Wood for years. A movement had been afoot for about two years to reinstate such training, but the action was moving very slowly through the TRADOC and Department of the Army channels. Safety, obviously, was a big concern. The uniqueness of Operation Team Builder

provided an opportunity to undertake such training as a real-life "test case"; a special variance was granted by Major General Schroeder to conduct this training.

With absolutely outstanding support from instructors in the Engineer School (lead by Warrant Officer Vann, an Australian exchange officer and mine expert), each Team Builder soldier had an opportunity to arm and disarm several anti-tank mines. The value of this training went well beyond the actual mechanics of mine warfare-- it instilled confidence in all the soldiers, and quickly brought home the seriousness of their training.

c. Breaching a Complex Obstacle. For some time at Fort Leonard Wood, there had been talk about creating in the southern part of the post a Thunder Alley-- a complex obstacle (a series of individual obstacles built in depth to be mutually supportive of one another) against which breaching forces could pit their skill. But time and money being what they were, nothing had come of it. Operation Team Builder changed that, at least temporarily.

News reports abounded with stories of Iraqi defensive works in depth, consisting of hugh anti-tank ditches, millions of mines, flaming oil trenches, and the like. Indeed, satellite imagery confirmed many of these reports. Breaching such formidable obstacle systems would clearly be a prime engineer mission during any offensive action, so the Team Builder training devoted considerable time to this key mission.

Building the simulated Iraqi complex obstacle at Fort

Leonard Wood is a story in its own right, which will be addressed in the next section. From a training viewpoint, it proved its weight in gold. Training stations were set up along the side of the obstacle system; individual breaching skills could be practiced and honed there. Squad-level battle drills were practiced on the assorted obstacles; at any one time, the facility could easily support nine different squads, each engaged in various breaching drills and exercises. And the entire complex obstacle was wide enough to permit two simultaneous platoon breaches (though, in practice, only one platoon was run at a time).

The platoon-level breaching training was a virtual model of the crawl-walk-run methodology. The crawl stage found each platoon member walking the course and play-acting an assigned role-- a group of ten soldiers representing an APC-mounted squad, two soldiers representing the operator and crewman of an Armored Vehicle Launched Bridge (AVLB), three other soldiers representing a Combat Engineer Vehicle (CEV), and so on. This phase, which was repeatedly practiced under the watchful eye of the Engineer School's senior armor officer, Lieutenant Colonel Kovacic, was essential to understanding the choreography of a deliberate breaching operation.

The walk phase found the platoon members manning the actual equipment (CEV and AVLB crews consisted of committee instructors) and slowly winding their way through the obstacle, stopping frequently to discuss, review, and conduct "what-if drills".

Finally, full-speed breaching exercises, with smoke, pyrotechnics, and other combat simulators were conducted during the run phase. It was, quite simply, marvelous training.

By Friday, 25 January 1991, no definitive word had yet been received concerning deployment of the Team Builder platoons; the air war continued unabated, as did talk about impending ground action. Because the Team Builder deployment remained uncertain, DPTM directed the battalion to plan a follow-on two-week training schedule. Taking some liberty with this guidance, Lieutenant Colonel Buck had the battalion staff first develop a detailed one-week training plan, to carry the operation from 30 January 1991 to 6 February 1991. His intent was to subsequently plan an additional two-week training program, taking the operation to 19 February 1991.

With the platoon cadre on-board, their input for the third week of training was accomplished up front, as opposed to essentially after-the-fact (as had occurred, out of necessity, during the development of the first two-week training plan). The platoon leadership's consensus was to return to individual skills and squad-level training. Each platoon had its own list of shortcomings which it wanted to fix, so five separate training schedules were drawn up. Captain Thomas' main role was to juggle training assets as best he could. Only the first day, 30 January 1991, of this follow-on training plan was executed. That afternoon, the deployment order was received.

All-in-all, the Operation Team Builder training program was

a tremendous success. Adhering to a few straight-forward goals and tenets ensured good, solid training; permitted the best use of the time available; allowed for relatively quick adjustments to unexpected resource constraints and abrupt changes in the weather; and facilitated the methodical development of the follow-on training plan (though only one day of it was executed).

Key to this entire effort was leadership. During peacetime, Major General Schroeder had established a combat-oriented training atmosphere which permeated all facets and levels of the post's training mission. During Operation Team Builder, the chain of command conducted tough, realistic training as it had for months prior; the platoon cadre members, and those assisting them, can rightfully be proud of the tremendous training they completed. The driving force behind this success was Captain Stan Thomas: he was the dynamo who made it possible for the cadre to conduct the training as well as they did.

SERVICE SUPPORT CHALLENGES

Compared to the training arena, the challenges in the service support arena were more numerous, more diverse, and generally more demanding. The following service support concerns and highlights are addressed in this section: time, maintenance, the complex obstacle, Class V, and the Central Issue Facility.

Time. During the conduct of Operation Team Builder, the press of time most seriously affected the service support activities. By the time the initial training plan had jelled and

was blessed by post-level authorities, mere days remained before training started. Only a Herculean effort by those engaged in the business of service support, principally logistics, guaranteed that training commenced as scheduled.

Much of the service support coordination was accomplished by battalion representatives, with the brigade's blessing. Once initial coordination was accomplished, considerable effort and time was devoted, out of necessity, to double- and triple-checking the details of each service support-related transaction. The battalion's representatives, Major Chisholm and Captain Wilson, quickly discovered that with the magnitude of Desert Shield/Storm activity underway on the post, the tendency for things to "fall through the crack" had greatly increased. By and large, all the post's agencies were trying their best, but the volume of requirements was so staggering that frequent back-checking by battalion representatives was necessary to keep everything on track. However, this double- and triple-checking used up a lot of valuable time.

Maintenance. With the initiation of Operation Team Builder, the battalion's maintenance priority moved to the top of the list, as promised by DPTM. The first challenge was to get the operational condition of the battalion's vehicle fleet quickly back up to a manageable level. DOL's quick response with Class IX repair parts, along with some judicious cannibalization, allowed the battalion's motor pool staff to get almost all of the vehicles critical to Operation Team Builder, especially the

HMMWVs and APCs, operational during the week that proceeded the start of training. DOL's response at the depot level was no less superb, with several major vehicular components being replaced overnight.

With the start of training, the importance of well-conducted preventative maintenance checks and services (PMCS) quickly became apparent, as newly trained operators (volunteers from among the soldiers in each squad) began breaking the equipment faster than it could be fixed. Much of the problem rested with the squad leaders who, though repeatedly reminded and cautioned, took several days to get back into the habit of directing PMCS as they had practiced in TOE units, which they had forgotten in the TDA environment (where most cadre members have no responsibility for vehicle upkeep).

Complex Obstacle. The siting and construction of the simulated Iraqi complex obstacle (components of which were based on satellite imagery, as depicted in Appendix F) proved to be a major undertaking. Eventually, the battalion commander had to become personally involved for an extended period of time. And Sergeant First Class Robinson was forced to virtually abandon all other battalion operations for about 48 hours in an effort to get the project rolling.

The most difficult aspect of this undertaking was obtaining a suitable site. A large, relatively flat area, with nothing more than grass and small shrubs growing on it, was needed. It had to be at least 300 meters wide and one kilometer deep.

Additionally, areas suitable for marshalling and assembling platoon-sized units had to be located nearby . Furthermore, the battalion commander desired the location to be relatively close to main post to minimize travel time and to facilitate coordination, resupply and the like, as this was envisioned to be the site of considerable training activity.

Suitable close-in locations to the east, in the Big Piney River Valley, proved unusable due to various archeological restrictions. Areas on the west side of post, in the Rubidoux River valley, where digging operations and tactical maneuvers were frequently conducted, were either too small or too wooded. And the southern area of post, long considered a good site for Thunder Alley, was avoided due to the considerable time required to travel to and from the area. Finally, after some bartering with Range Control, an area directly off of the main range road, opposite the post's airfield (close to main post) was selected. Unfortunately, its selection meant tearing up a well-maintained, pasture-like expanse of ground. But since the battalion "owned" the training committee that "owned" this patch of land, the mild protests of the committee members fell on the deaf ears of the battalion commander.

As the siting drama was being acted out, Sergeant First Class Robinson was concentrating on obtaining the necessary Class IV barrier materials, principally concertina wire and training mines. The quantities required were huge. Relying on DPTM and the Brigade S4 staff and pulling every string at his disposal,

the enterprising Sergeant First Class Robinson succeeded in amassing the needed material in a very hectic two days.

Then all that was required was installation. Troops of a sister OSUT unit, the 35th Engineer Battalion, installed rows of mines and rolls upon rolls of concertina wire, while equipment operators from the engineer Advanced Individual Training battalion on post, the 577th Engineer Battalion, cut the tank ditch and built the berm.

The expeditious completion of the complex obstacle was a tremendous example of great post-level teamwork; the complex obstacle was ready on time, and training on it proceeded without delay. Its location immediately adjacent to the main range road provided some great scenes of combat training for passersby, sometimes even creating small traffic jams!

Class V (Explosives and Ammunition). Overall, the supply and control of Class V-- the most critical expendable training resource during the operation-- produced on-going controversy throughout the operation. Various CONUS-wide Class V shortages had been developing for months due to the demands of Desert Shield; adding additional requirements such as Operation Team Builder only exacerbated the situation. The operation's Class V requirements, which DPTM honored to the maximum extent possible, consumed Fort Leonard Wood's on-hand supply of C-4 plastic explosive, detonation cord, M2 cal .50 machine gun ammunition, and live anti-tank mines. The stockage levels of other Class V items were drawn dangerously low.

Of considerable concern in the Class V business was accountability; this proved to be the biggest recurring supply headache for the battalion during Operation Team Builder. This is the only area in which iron-clad procedures and requirements, some of questionable wisdom and utility, could not be bent regardless of the urgency of the situation. Thus, the Ammunition Supply Point's (ASP) holding area, certified at a maximum of only one hundred pounds of storage (though it could have held much more), was virtually useless to the battalion (which was drawing four and five hundred pounds of Class V per day); the ASP's temporary storage area was too small to obtain the minimum required separation distances between different categories of Class V; and the ASP staff was forever dissatisfied with the battalion's attempts to store ammunition on-site at various ranges in an effort to maximize training time. In the name of regulations, common sense was sometimes overlooked by the ASP staff.

From the battalion commander's viewpoint, which he expressed to the DPTM on several occasions, it appeared that the only agency on post that did not realize Desert Storm was underway was the ASP. To the very end of Operation Team Builder, the ASP staff and the battalion engaged in an exchange of delinquency reports and replies by endorsement, with little help from anyone else.

Central Issue Facility (CIF). The platoon cadre received a very basic issue of CIF gear, such as pistol belts, canteens,

Kevlar helmets, and wet weather gear, as part of their in-processing to the battalion. The soldiers transferring from the 31st Engineer Battalion to the 589th brought with them their field equipment issued at the beginning of their OSUT cycle (some of which was not in great shape, having been used over many training cycles). In short, all platoon members had enough field gear to accomplish the training at hand. But getting them outfitted for deployment to a combat zone was another story.

Unlike the POM, which was accomplished at the beginning of Operation Team Builder, the shortage of many items at the CIF largely dictated that the issue of combat-quality field equipment to those in Operation Team Builder be deferred until such time as deployment overseas became a certainty. Since the deployment notice was finally received just four days before departure (two of those days being weekend days), the issue of combat-grade CIF equipment became a last-minute action, fraught with difficulties.

The basic problem was that the CIF had set aside for the Team Builder platoons just 195 sets of field gear and NBC suits, using a notional formula for sizes of equipment needed by a population of 185. The members of the five platoons certainly appeared to represent a cross-section of America (in terms of physical stature), but the CIF notional sizing estimate was far off. As a result, the issue and exchange of combat-quality gear with the CIF became an often-repeated activity during the last days of Operation Team Builder.

On the one hand, the staff of the CIF deserves commendation

for the long hours they devoted to supporting the platoons in the days just prior to deployment. On the other hand, though, more equipment, in various sizes, should have been set aside for the platoons. Ultimately, the soldiers received about a 99 percent fill; the articles not available for the deploying soldiers were deemed relatively inconsequential.

Pivotal to the success of Operation Team Builder was the generally superb administrative and logistical support the battalion received from the brigade staff and the many post-level agencies. Operation Team Builder was the most compressed, resource-intense undertaking experienced during the battalion commander's career. The architect of this outstanding service support effort was Major David Chisholm, who employed every means at his disposal, short of stealing, to make it happen. Clearly, more than half the credit for the success of the operation goes to him.

DEPLOYMENT

Wednesday afternoon, 30 January 1991, the battalion commander received word from the DPTM via phone that the five platoons of Operation Team Builder would, in fact, deploy to the Gulf; departure would occur sometime during the period 2-4 February. The battalion commander recommended to the DPTM that all formal training be immediately suspended; thereafter, full attention would be devoted to preparation for deployment. Colonel Morgan agreed and added that DPTM would inform all post

agencies of the impending deployment.

At the battalion, Lieutenant Colonel Buck hastily called a meeting with the battalion staff and Captain Thomas. All were informed of the deployment notice, and an ensuing round-table discussion addressed those actions remaining to be accomplished prior to deployment. All-in-all, things were in pretty good shape, thanks to the continuing effort of the battalion staff, brigade representatives, and the many post-level agencies which had supported Operation Team Builder.

Next, Lieutenant Colonel Buck and Captain Thomas met with the platoon leaders and told them the news. The common emotion among the platoon leaders was a sense of relief-- the most frequently asked question of the past three weeks had finally been answered, one way or the other. Lieutenant Colonel Buck asked them to make sure all the soldiers had an opportunity to phone home that evening and to ensure that the platoon cadre relaxed that night; final preparation for deployment would start the next morning.

The following days were a whirlwind of activity, largely devoted to resolving a myriad of last-minute details and issues. The Team Builder ranks were pared down to the required 35 privates and three staff sergeant squad leaders per platoon. Several more trips were made to the CIF and, in some cases, bulk issues of equipment were hauled back from CIF and distributed in the unit area. Final touches were put on personal financial and legal arrangements. Slack time was devoted to refresher training

on key individual survival skills, such as NBC protection, land navigation, and first aid.

Word was received on Thursday afternoon that the platoons would depart the St. Louis International Airport on Sunday, 3 February 1991, at 1400 hrs. Their departure time from Fort Leonard Wood, via bus, was set for 1000 hrs that morning. Arranging transportation was one of the easiest tasks for the battalion's representatives, as Mr. Porter, the post's Transportation Officer, ran a truly efficient operation.

A formal departure ceremony, the groundwork of which had been laid in the early days of the operation, was conducted on Friday, 1 February 1991, at 1600 hrs in the post field house. (The location was quite appropriate, as this was the place where the battalion commander had received the warning order exactly three weeks earlier.) The well-attended event (many of the cadre were impressed by the number of folks from across post who came to witness the ceremony) was, in effect, a second graduation ceremony for the 150 young soldiers who manned the platoons. The event was both a proud and sobering time for those in attendance, soldiers and guests alike. One Team Builder soldier was heard wryly commenting to a platoon buddy shortly after the ceremony, "Well, I guess this means it's for real."

Saturday, 2 February 1991, found the platoons checking over their equipment one last time. Those with parents in the area had been given an all-night pass the evening before, and all the soldiers were given a few hours off Saturday for one final PX run

and a farewell visit to the on-post Burger King. The platoon cadre members divided their time between their charges and their families. To a man, morale was high.

Dawn on Sunday, 3 February 1991, found a bee hive of activity in the company area. The battalion's chaplain, Captain Tim Atkinson, conducted two well-attended ceremonies in the barracks that morning. The final CIF issue, a bulk on-site delivery, was made as promised by the CIF (the expected emergency shipment from Fort Knox had arrived as planned the night before). The large cargo truck was filled with bags and equipment. Nervous anticipation filled the air, broken periodically by moments of levity, such as when condoms were passed out to all the soldiers-- not for their intended purpose, but to cover the muzzles of their rifles upon arriving in the Gulf.

An hour before departure time, the platoons assembled in the company area. As planned, Major General Schroeder arrived and moved from platoon to platoon. Gathering each group around him, he reaffirmed the confidence he had in them, assured them the training they had experienced would allow them to accomplish any assigned mission, reminded them to continue working as a team, and wished them well. With that accomplished, a final company formation was held. Captain Thomas and Lieutenant Colonel Buck wished all a safe trip and speedy return. With that, loading of the buses commenced. At 1005 hrs, the five platoons of Operation Team Builder began their trip to the Gulf.

That afternoon, upon confirmation that the Operation Team

Builder plane had departed the St. Louis airport, Lieutenant Colonel Buck signed the last of the letters being mailed to the families of the platoon cadre and members, advising each of their soldier's departure and furnishing battalion-level points of contact and phone numbers. Then, he dismissed everyone in the battalion who had been involved with Operation Team Builder until Tuesday, with the understanding that they remain in phone contact. That small gesture was the least that could be done for such a dedicated bunch of folks.

KEY OBSERVATIONS AND COMMENTS

A myriad of observations and lessons learned arise from Operation Team Builder. Most are applicable to engineer units at the tactical level; many of these observations were recorded and (in addition to being placed in the battalion's historical file and distributed to post agencies) forwarded to the 547th Engineer Battalion in Germany for use during that unit's train-up of 27 engineer squads for deployment to the Gulf (this was the mission the commanding general had alluded to at the end of Lieutenant Colonel Buck's Operation Team Builder briefing on 14 January 1991). Other Team Builder observations and lessons learned are applicable across the Army. These are addressed in this section.

Replacement Operations. Of the five Team Builder platoons deployed to the Gulf, only one (4th Platoon) remained intact and functioned as a platoon throughout its deployment. Two other platoons were completely broken apart; the members were assigned

out as individual replacements. Another platoon was assigned out on a squad basis (and these squads remained intact during their deployment, albeit in different companies or battalions). The last platoon had one squad assigned out intact, while the members of the remaining two squads were assigned out as individual replacements. With the exception of 4th Platoon, the platoon leaders and platoon sergeants were all assigned out as individual replacements, as were the squad leaders of those squads broken up for individual replacements.

While the leadership of the Army generally favored replacement by squads, crews, and teams (SCT) during Operation Desert Storm, the leadership in the theater wanted individual replacements.² The net result, from a Team Builder perspective, was that considerable time, resources, and effort were wasted training up platoons of soldiers who ultimately never served and fought together. While individual survival and combat engineer skills were, indeed, honed, much of the emphasis on building cohesion, fostering teamwork, and mastering squad- and platoon-level battle drills turned out to be wasted effort.

The emphasis the theater leadership placed on individual replacements is understandable. From the senior leaders' point of view, a few individuals are ostensibly easier to absorb into a unit than an entire squad or platoon. Yet the positive experience of 4th Platoon certainly suggests that small-unit replacement can work. Assigned to the engineer company of the 3rd Armored Cavalry Regiment, 4th Platoon quickly proved its

worth and served as an integral member of the regiment during all phases of Desert Storm.

Individual replacement practices provide manpower, theoretically in the right quantity and MOS (if a company is short thirteen combat engineers, it receives thirteen combat engineers) to a given unit. But a replacement individual generally does not immediately become an integral member of the unit; inevitably, there is some amount of lag time before the replacement soldier is accepted or has an opportunity to prove himself. Many of the Team Builder soldiers detailed out as individual replacements experienced this reaction. (In fact, a few never did feel accepted by their respective units.)

On the other hand, a properly trained replacement squad or platoon is a cohesive element. The soldiers of such a unit are comfortable with one another; generally, they work as a team. Thus while the leaders of a replacement squad or platoon must adjust to the new parent unit's policies and leadership, at least all the members of that squad or platoon can readily function together and contribute something as a group. The importance of cohesion, a key benefit of a small unit replacement policy, can not be overlooked, for cohesion is "the bedrock which keeps units together during the stress and chaos of combat."

The success of SCT replacements appears largely a function of leadership. In the case of 4th Platoon, the regiment's engineer company commander was happy to have any extra help assigned to him, and the 4th Platoon leader-platoon sergeant

combination (First Lieutenant Larson and Sergeant First Class Nichols) happened to be a very strong leadership team. Assuming the Army of the future will only retain the finest leaders, the leadership necessary to make small unit replacement practices work should be in place. Accordingly, the Army should take a hard look at institutionalizing the small unit replacement process as the norm for doing business during war. With proper leadership, small unit replacements can be more effective than individual replacement practices.

Training Quality. "High quality training was one of the more important contributors to the preparedness of US forces and subsequent success in the Gulf operations." Based on the feedback of Team Builder participants after their return from the Gulf, the quality of the training (both the Team Builder training and the earlier OSUT training for the new soldiers) they received at Fort Leonard Wood prior to deployment was top-notch. To a man, the Team Builder soldiers reporting of their training in the basics of combat engineering (demolitions, mine warfare, and the conduct of obstacle breaching operations) claimed they had as much skill as (or, in some cases, more skill than) the engineer members of the units to which they were assigned. Across the board, the Team Builder soldiers felt better versed in mine warfare, as they could confidently discuss what arming and disarming a live mine felt like, something the more experienced soldiers already assigned to engineer units in the field had never experienced. One engineer battalion deployed to the Gulf

had not had any demolitions training in over 18 months; the only soldiers current in the subject were those Team Builder soldiers assigned to that unit.

Non-engineer Team Builder training also appeared to be largely on target. One engineer battalion was issued a basic load of AT-4 anti-tank missiles; the only individuals in the entire battalion who knew anything about the rocket were the five Team Builder privates assigned to the battalion as individual replacements. When these privates stepped forward and showed their stuff, they were immediately made trainers for the unit's officers and noncommissioned officers, who in turn trained the other soldiers in the battalion. The only glaring omission in this arena was the lack of any unexploded ordnance orientation training, which is discussed later in this section.

Keys to the success of the Team Builder training program were strong leadership, adequate time, and sufficient resources. As previously addressed, the senior leadership of post had, for some time, fostered a combat-oriented training philosophy. This philosophy was well-entrenched by the time Operation Team Builder evolved. Some of the best senior lieutenants and noncommissioned officers on Fort Leonard Wood were picked for this operation; the success of the training program is directly attributable to their technical and leadership skills, and their application of the post's combat-oriented training philosophy. Directing their effort was a super company commander, and behind him was a small but capable battalion staff, backed up by responsive brigade and

post-level organizations. The only weakness was the aforementioned lack of assistant squad leaders, which sometimes left the squad leaders feeling like one-armed paper hangers--capable, but not as efficient as desired.

Rarely is there enough time to do a job. But in this case, three weeks was about right to accomplish the basic mission (including planning and training). A couple of days could have been shaved off, but any less time would have really cramped the cadre, especially given the resource challenges on a TRADOC post such as Fort Leonard Wood. Any additional time would have found the platoons repeating a lot of training-- good for fine-tuning techniques, but not absolutely necessary to accomplish assigned tasks.

Training Resources. "The availability of resources to support training was a concern [to the participants in the TRADOC Commander's Desert Storm Conference]. A balance [is] required between sustaining quality training and maintaining existing systems with less money. There is a real danger in not being able to train as we fight."⁵

The typical TRADOC training battalion is resource poor--most equipment is owned by assorted training committees and signed out to the training battalions (or simply used on the committee site) on a rotational basis. Thus, with the advent of Operation Team Builder, the 589th Engineer Battalion found itself scurrying around post to round up much of what it needed on very short notice. This was a very time-consuming and laborious

undertaking, even with the wholehearted assistance of the brigade and DPTM. It was fortuitous that the Sapper Leader Detachment was not in a training cycle, thereby leaving a lot of tactical equipment (such as radios, compasses, and night vision goggles) much more readily available than might otherwise have been the case.

The most critical non-expendable training resources for this operation were the M-113A2 and M-113A3 armored personnel carriers (APC). At the time of this operation, fifteen APCs were assigned to post in support of various training programs. That was actually six more APCs than should have been on post; the excess APCs had been carried on the books for some time because of the value of this equipment to the post's training program. The availability of fifteen APCs allowed three Team Builder platoons to train with the tracks simultaneously, while the three remaining vehicles were rotated through maintenance.

Had only the nine authorized APCs been available, the mechanized training of Operation Team Builder would have been limited to a mere orientation; additional training to develop a functional understanding of mechanized engineer operations, such as was accomplished during Operation Team Builder, would have required more time than the three weeks available.

Given the Army's renewed emphasis on heavy forces, consideration must be given to supporting an increased number of APCs at those TRADOC installations where mechanized training is or should be conducted. Alternatively, some form of a CONUS-

based depot with war-ready equipment should be established, from which such items such as APCs can be quickly drawn and shipped to those TRADOC posts where mechanized training has been directed in support of any mobilization.

Safety. The key to Team Builder's virtually flawless safety record was superb leadership, at all levels. Outstanding leadership assured proper safety in four ways during this operation: first, a post-wide safety mind set had been inculcated in all leaders during months of peacetime training and sound safety programs had been religiously followed; second, risk assessments (a combination of deliberate, written assessments, and informal, on-the-spot evaluations) provided a proactive analysis of potential safety hazards; third, constant vigilance by the trainers during the conduct of Team Builder training allowed quick response to developing safety problems; and finally, the oversight afforded by the post safety office provided a good double-check of the trainers' efforts.

True, Operation Team Builder lasted only three weeks, but the pace of training, the initial lack of cohesion within the platoons, and the newness of the soldiers to mechanized training presented an environment fraught with danger. In the end, the conduct of Team Builder clearly proved that "good supervision lessens accident probability."

Unexploded Ordnance (UXO). While Operation Team Builder's safety record was superb, an important aspect of battlefield safety-- the treatment of unexploded ordnance (UXO)-- was

completely overlooked during training. Given what is now known about the UXO situation during and after Desert Storm, wherein "lack of previous training awareness led to needless casualties when soldiers picked up UXO and vehicles drove over UXO," the Team Builder training plan was certainly deficient in this regard.

Presently, the UXO issue is the subject of active discussion throughout TRADOC and at Department of the Army level. At some point, this discussion must capture the essential elements of UXO protocol in the form of a training plan suitable for inclusion in any pre-deployment training package. Additionally, TRADOC should consider adding a period of instruction on the treatment of UXOs to its basic or advanced training programs of instruction. The UXO situation poses a unique, and deadly, safety problem which should be periodically addressed during every unit's training program, beginning with an initial indoctrination of each soldier during his or her initial entry training.

Personal Preparedness. Obviously, "soldiers are responsible for their own personal affairs and those of their families." Yet within the TDA environment, prior to the initiation of Operation Desert Shield, many of the cadre seldom considered the possibility of experiencing a short-notice, long-term deployment. Such a thing simply did not happen to someone assigned in a TDA billet. As a result, a lot of cadre members at Fort Leonard Wood, having been alerted for deployment to the Gulf to fill an individual personnel levy or as part of Operation Team Builder,

found themselves scurrying around at the last minute to sort out a variety of personal affair issues.

As the Army gets smaller, those on active duty, regardless of duty station or assignment, must be all the more prepared to deploy on short notice. Unit leaders have an obligation to ensure that their soldiers have their affairs in order. All units and posts should implement some form of periodic, methodical screening to ensure that basic personal affair instruments and arrangements exist, or have at least been consciously considered. While some might consider this meddling in one's affairs, the fact remains that the mission of the Army dictates that unit leaders must ensure the deployment readiness of their soldiers.

EPILOGUE

All deployed members of the Operation Team Builder platoons returned safely to Fort Leonard Wood in the fifty days following cessation of the ground war. Fourth Platoon returned intact, just as they had been deployed and utilized. They received the best homecoming, which included being featured guests at a "Desert Storm Appreciation Night," coincidentally held the evening after their return to Fort Leonard Wood by residents of Springfield, Missouri. The post provided a bus for the 85-mile trip, the Fort Leonard Wood chapter of the Association of the United States Army bought each soldier a dinner that night, the town treated them to free drinks and gave them front row seats

during the entertainment program; and the cheer leaders of a local college wowed them. The soldiers loved it.

The remainder of the Team Builder personnel returned in piecemeal fashion, much as they had been used in the Gulf. A couple of squads returned intact, but most of the soldiers and cadre returned in groups of four and five.

Each returning Team Builder soldier was chaperoned by the battalion through a two- or three-day re-processing program, which included equipment turn-in, blood work, pay adjustments, and the like. The cadre then returned to their former Fort Leonard Wood units. Each of the 150 platoon members received permanent change of duty station (PCS) orders and departed on a long-overdue post-graduation two-week leave en route to his first active duty PCS station. Enlisted Engineer Branch at Personnel Command (PERSCOM) performed a yeoman's service by issuing PCS orders within two days of being notified that a Team Builder soldier had returned to Fort Wood. And any Team Builder soldier who had originally waived his airborne school option was given a new class date if he wished.

The 589th Engineer Battalion's contribution to the Gulf war did not end with the deployment of the five Team Builder platoons. On Saturday, 9 February 1991, the 589th Engineer Battalion was tasked to receive and train (in squad- and platoon-level engineer skills) over five hundred combat engineer soldiers, recently activated from the Individual Ready Reserve (IRR).

These soldiers had reported to Fort Leonard Wood two weeks earlier and received twelve days of refresher individual training from an activated reserve engineer training battalion. However, the scheduled deployment to the Gulf of these IRR soldiers as individual replacements was then indefinitely delayed. Because another 400 activated IRR soldiers were reporting for refresher training from the same reserve battalion, the first group was transferred to the 589th for collective training. This undertaking, dubbed Operation Collective Thunder, concluded 12 March 1991, when the 589th out-processed these soldiers and put them on buses and planes bound for their homes.

In April 1991, as part of TRADOC's restructuring in response to the Army's draw down, the 589th Engineer Battalion inactivated its three training companies and assumed responsibility for running all the ranges on post. In June 1992, the 589th was redesignated the 577th Engineer Battalion.

APPENDIX A

11 January 91

SITUATION

Five engineer platoons are needed in country on or about 1 February 1991 to serve as replacement elements (platoon-level).

MISSION

Train five combat engineer platoons of about 33 men each in combat engineer skills, with emphasis on collective tasks and oriented towards mechanized operations, during the period 18-29 January 1991.

SPECIFIED AND IMPLIED TASKS

A. SPECIFIED

1. Battle drills (when appropriate, mechanized oriented); take off from Sapper PEs
2. Emphasis on mobility operations
3. STX-type activities; combined arms flavor
4. Familiarization with APC oprns

B. IMPLIED

1. Develop unit cohesion, stress teamwork, and emphasize battle-buddy concept.
2. Reinforcement of basic survival skills (most notably NBC, first aid, land nav, commo, & desert survival).
3. Become familiar with the Iraqi threat.
4. Maintain physical fitness.
5. Become familiar with the APC--operation, maintenance, and employment.
6. Train selected 12B soldiers to drive the APC.
7. Train up on key APC systems-- radio and cal
- .50.
8. Review the basics of demolitions and land mines
9. Practice breaching battle drills against both simple and complex obstacles.

10. Practice mechanized row mining.
11. Orientation to CEV, AVLB, and ACE oprns and capabilities
12. Practice night operations
13. Practice mounted movements
14. Practice/review fighting position emplacement (both individual and track).
15. Leaders-- review troop leading procedures, OPORD techniques, and demo calcs

CONCEPT OF OPERATION

A. COMMAND AND CONTROL

1. All personnel assigned to 589th. Bn assumes all admin responsibilities.
2. Form one company of five platoons...full company superstructure (CO [CPT], XO [1LT], 1SG [E-8], oprns, supply, etc).
3. Billet in tins (one plt per tin= cohesion; out of the IET environment; "something special"; proximity to motor pool and "back 40").

B. TRAINING

1. All training conducted under the auspices of the 589th S3.
2. Platoon cadres take the lead; representatives from DME, SLC, and selected others to augment and assist as required.
3. Do a few things well... and get some sleep. Basically a core 8-hour trng day; no Ranger School "mentality".
4. Stress rehearsals; crawl-walk-run concept; and use of on-site AARs.
5. Max use of our "good" training aids and inert demo w/ "kicker" charges (caps and det cord).
6. Safety-- weather and advanced nature of trng.

Buck

APPENDIX B

UNCLASSIFIED

COPY OF COPIES
HEADQUARTERS
USAECFLW
FORT LEONARD WOOD, MO 65473
14 January 1991

Reference: NONE

Time Zone used throughout the order: Sierra (Local)

USAECFLW OPORD: Operation Team Building

Task Organization: N/A

1. SITUATION: Fort Leonard Wood will train 5 platoons of Combat Engineers with emphasis on heavy division employment.

2. MISSION: The United State Army Engineer Center and Fort Leonard Wood constitutes and trains 5 Combat Engineer Platoons and prepare for deployment by 1 Feb 91 in support of Operation Desert Shield.

3. EXECUTION:

a. COMMANDER'S INTENT: Soldiers selected to form the platoons will be highly motivated quality individuals. Platoons will be organized and trained by the 1st Engr Bde with assistance from the USAES, as required. Platoons will be prepared for overseas movement and made ready for deployment to the CONUS Replacement Center from Fort Leonard Wood NLT 1 Feb 91.

b. CONCEPT OF THE OPERATION: Fort Leonard Wood will constitute, train and prepare for deployment to the CONUS Replacement Center, 5 Engineer platoons. Each platoon will consist of 1 first lieutenant (Platoon Leader); 1 sergeant first class (Platoon Sergeant); 3 staff sergeants (Squad Leaders) and 30 privates (only 27 will deploy). Total personnel requirements is 5 1LTs, 5 SFCs, 15 SSGs, and 150 PVTs.

c. 1ST ENGR BDE.

(1) Select 150 privates from C and D Companies, 31st Engineer Battalion and provide names of selectees to DPTM NLT 1700, 14 Jan 91. Selected soldiers must not be under enlistment assignment option.

Classified by: NA
Declassify By: NA

UNCLASSIFIED

(2) Obtain the names of 5 first lieutenants, 5 sergeants first class and 15 staff sergeants from DPTM by COB 14 Jan 91.

(3) Organize the lieutenants, sergeants and privates in a platoon configuration of 3 squads with 10 privates per squad (only 9 privates per squad will deploy)

(4) Provide command and control for the 5 platoons.

(5) Develop training plan to train the platoons from 18-29 Jan 91. Training plan will have emphasis on heavy division engineer support missions.

(6) Submit training plan to DPTM for approval and scheduling NLT COB 16 Jan 91.

(7) Identify additional training requirements, such as instructors, ammunition and demolitions, training areas, ranges and other facilities and equipment.

(8) Assess the brigade capability to meet requirements with organic assets and submit shortfalls to DPTM NLT 16 Jan 91.

(9) Train all platoons from 18-29 January separately or together in combined arms squad and platoon operations with emphasis on obstacle breaching, demolitions, land mine warfare, M-113A3 driving and crew drills to include entering and exiting under combat conditions; NBC operations. Weapons training will include firing of the M16A2 rifle, M60 machine gun, 50 caliber machine gun, AT-4, M203 grenade launcher. Include Iraqi threat orientations developed by the Threat Office, USAES.

(10) Orient training on desert operations using lessons learned to date available from the Combat Operations Division, USAES. Situational training exercises using established battle drills will be used throughout the training period. Night training time will be gradually increased during the training period such that at least one-half of the training is conducted during darkness by the mid-point of the period.

(11) Coordinate with DEH for additional billeting requirements to house training platoons. Platoons will be placed together in a single barracks location, however, all 5 platoons need not be in the same barracks.

(12) Coordinate with the 136th Engr Bde for use of M16A2 rifles and M203. DPTM will assist as required.

(13) Coordinate through/with DPTM for any additional support required to execute this mission.

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(14) Keep the Emergency Operations Center informed on a daily basis of training progress.

(15) Schedule and conduct an appropriate departure ceremony for platoons.

d. 136TH ENGR BDE.

(1) Provide 1st Engr Bde M-16A2s and M203 for use in the conducting of platoon training.

(2) Provide 5 training CEOI and night vision equipment as required.

(3) Provide additional training support as tasked by DPTM.

e. DPTM.

(1) Exercise staff supervision and coordination of this operation.

(2) Tng Div, DPTM, will assist 1st Engr Bde in developing training plan and scheduling of all necessary ranges. Provide ammunition/munitions to accomplish training plan.

(3) EOC will make CONUS Replacement Center coordination.

(4) Task and coordinate with installation activities for any additional training support requirements.

(5) Coordinate selection of leaders and soldiers with the respective elements.

f. DMP.

(1) Publish orders for all individuals.

(2) Coordinate with DPTM for selection of individuals.

(3) Coordinate and execute POM/POR, NLT 31 Jan 91, for soldiers and soldiers families as required.

(4) Adjust outprocessing as required by 1st Engr Bde for C/D 31st Engr Bn soldiers.

g. DOL.

(1) Provide DBDU'S for deploying platoons.

UNCLASSIFIED

- (2) Provide CTA 50 as required.
- (3) Provide on-post transportation as required to execute training.
- (4) Provide personal property storage/shipment to authorized individuals.
- (5) Provide travel of training platoons to CRC for deployment.
- (6) Coordinate with 1st Engr Bde to determine messing facility requirement for training platoons.
- (7) Provide ___ MREs for training platoon.
- (8) Adjust CIF turn-in as required by 1st Engr Bde for C/D, 31st Engr Bn soldiers.
- h. DEH. Provide billeting as required by the 1st Engr Bde.
- i. DAC.
 - (1) Provide threat briefings on order.
 - (2) Provide additional Combine Arms Leader training as required.
 - (3) Provide communication training and support as required.
 - (4) Provide threat training support as required in support of the 1st Engr Bde training plan.
- j. DRM.
 - (1) Publish orders reactivating D/589th provisional.
 - (2) Provide the EOC and 1st Engr Bde with pay strategy.
- k. DCFA. Coordinate with 1st Engr Bde for soldier and family support.

1. COORDINATING INSTRUCTIONS.

- (1) All 150 privates selected will undergo training. If attrition has not eliminated 15 by the end of training, the command will select the deploying package to meet the configuration required.

UNCLASSIFIED

(2) Individuals will deploy with uniform and equipment to be identified by DPTM. Weapons and protective masks will be provided by the CONUS Replacement Center after departure from Fort Leonard Wood.

(3) The Commanding General will brief selected leaders at 1630, 14 Jan 91, in the Command Briefing Room, Hoge Hall.

(4) Intensify efforts to build cohesive squads as quickly as possible. Leaders should spend as much time as possible with squad members.

(5) Direct coordination is authorized and encouraged.

(6) All unresolved issues will be immediately addressed to the Emergency Operations Center.

4. SERVICE SUPPORT.

a. Uniforms will be issued prior to start of training.

b. Service support not specifically tasked in this plan will require submission of request to the Emergency Operations Center (EOC), 596-7204/1295, for approval.

5. COMMAND AND SIGNAL.

a. Command. The 1st Engr Bde Cdr is Commander of the 5 platoons.

b. Signal. Not applicable.

OFFICIAL:

SCHROEDER
MG


MORGAN
DPTM

DISTRIBUTION:

Cdr, 1st Engr Bde
Cdr, 136th Engr Bde
DAC, USAES
Dir, DRM
Dir, DCFA
Dir, DOL
Dir, DEH
Dir, DMP
C, P&O Div, DPTM
C, Tng Div, DPTM

OPERATION

TEAM

BUILDER

MISSION

CONSTITUTE AND TRAIN FIVE PLATOONS
OF COMBAT ENGINEERS AND PREPARE
THEM FOR DEPLOYMENT BY 1 FEB 91
IN SUPPORT OF OPERATION DESERT
SHIELD

GOALS

- BUILD COHESION AND TEAMWORK
- FINE-TUNE THE BASICS
- EXECUTE COLLECTIVE COMBAT
ENGINEER TASKS (EMPHASIS
ON MOBILITY OPERATIONS)
- PRACTICE, PRACTICE, PRACTICE

TENETS

- DO A FEW THINGS WELL
- LET THE LEADERS LEAD
(DECENTRALIZE THE TRAINING)
- BE SAFE

CONCEPT

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |



INDIVIDUAL SKILLS

| | 18 | 19 | 20 | 21 |
|---------|--------------------------|--------------|-------------------------|-----------------------------|
| AM | | FIRST AID | | NBC |
| PM | COMMO* | LAND NAV | LMW* | NBC |
| EVENING | THREAT BRIEF (ALL) | | DESERT OPNS (ALL) | NTC BREACH FILM (ALL) |

* CEOI/VINSON REPORT/RECORD

SQUAD SKILLS

| | 22 | 23 | 24 |
|---------|-----------------------|---|------------------------------|
| AM | VEHICLE OPERATIONS | CREW SERVED WEAPONS & LIVE FIRE | DISMOUNTED PATROLS, IMT * |
| PM | NBC | • (WITNESS CEV FIRING; AVLB/ ACE DEMO) | VEHICULAR MOVEMENTS |
| EVENING | | OPODS (LEADERS) | |

CALL FOR FIRE

*

PLATOON STX.

(25-29 JAN)

- **WEAPONS (M-16A2 ZERO & FIELD FIRE,
30D DAY & NIGHT)**
- **DEMO AND LIVE MINES**
- **ROW MINING**
- **BREACHING I**
- **BREACHING II**

TRAINING

PART I

| | <u>18 JAN</u> | <u>19 JAN</u> | <u>20 JAN</u> | <u>21 JAN</u> |
|-----------|--|--|------------------------------------|--|
| 0800-1200 | POM | 1ST AID - EVALUATE - SHOCK - CPR - DRESS/TOUR - MEDIVAC | PERSONAL TIME | NBC - DON PROT MASK - MOPP 1-4 - DECON SKIN - ID CASUALTY - BUDDY AID |
| 1300-1700 | COMMO - PRC 77 OPN - EXP ANTENNAE - FLD PHONES - 80P LINE RPTS | LAND NAV - COMPASS - DEAD RECKONING | LMW | NBC - ARM/DISARM - AP & AT MINES - INSTALL HPMF - DRINK FROM CANTEN - MAINTAIN MASK |
| 1900-2100 | THREAT BRIEFS | DESERT OPNS BRIEFS & TERRAIN TAPE | BREACHING OPNS BRIEF & NTC TAPE | |

TRAINING

PART II

| | <u>22 JAN</u> | <u>23 JAN</u> | <u>24 JAN</u> |
|-----------|---|---|---|
| 0800-1200 | M113 OPNS - RECOVERY - TRACK MAINT - PMCS - VISUAL SIGNALS | US WEAPONS - M60 - AT4 - M203 | DISMOUNTED MOVEMENT TECH - INDIVIDUAL - SQUAD |
| 1300-1700 | NBC TM TRNG - MOPP GEAR EXCHANGE - VEH WASHDOWN - M8 ALARM - NBC-1 RPTS | US WEAPONS - M2 | MOUNTED MOVE TECH - MOUNTING - DISMOUNTING - RXN DRILLS |
| 1930-2100 | | ENGINEER LDR ESTIMATE; OPORDS | |

TRAINING

PART III

(25-29 JAN)

0800-1700 • DEMO AND LIVE MINES

1300-2400 • WEAPONS
• ROW MINING
• BREACHING I
• BREACHING II

***DRIVERS' TRAINING**

18 JAN

19 JAN

0800 - 1200

**PMCS
TAMMS**

**DISPATCH PROCEDURES
OPERATE IN CONVOYS**

1300 - 1700

**PMCS
OPERATE VEH
IN MOTOR POOL**

**X-COUNTRY OPNS
RECOVERY TECHNIQUES**

1800 - 2200

**BREAK TRACK
SHORT TRACK
CHANGE TIRES**

**OPERATE IN BLACKOUT
DRIVE**

ATZT-TD-589th

14 January 1991

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: CG's Comments Concerning Brief on Operation Team Builder

1. On 14 January 1991, LTC Buck briefed the CG on the concept of Operation Team Builder. Present also were COL Harvey, COL Morgan, and CSM Woodall.

2. Summary of CG's comments/guidance:

a. General thoughts

1) Develop a METL...list the key platoon battle tasks... nothing more defensively oriented than hasty protective type obstacles...assume a divisional engineer battalion supporting the assault.

2) Safety...constantly remind the soldiers about safety...double check everything...example given was clearing a cal .50 twice each time to be safe...old timers need to impart "folklore" to the new soldiers.

3) The thread... constantly weave the thread throughout our training of what we're getting ready to do-- support of a mechanized assault in the desert.

4) The interrelationship between trainers (folks from any of the committees) and leaders (the platoon cadres)... our emphasis is correctly placed on decentralized training...after the committee trainers have done their thing, the sqd/plt needs to move to a different area and the unit leaders need to repeat the exercise, with the committee trainers doing the assessment and evaluation.

5) Truly historical times... this action will be an important part of FLW's AAR for Desert Shield...keep a journal... make resource notes in the margins... document everything.

6) PT... keep doing it... recurring feedback from Desert Shield indicates that good physical fitness helps one survive in the desert.

7) MREs... absolutely!... should ramp up to 100% consumption... need to provide requirement to DPTM.

b. Regarding our proposed training schedule

1) 20 Jan... orient the leader's training of LMW towards recon of MFs...ID of IOE...building of record of the MF they have reconned...just a little bit on the recording of hasty prot MFs and point MFs.

2) 21 Jan... LTC Somerville and his folks should "pitch" the film.

3) 23 Jan... LTC Somerville's people can help pitch the business of the leader's estimate during the evening class.

4) 24 Jan... stress, among other things, reaction to contact, reaction to air... a lot of mounting and dismounting drills.

5) 24 Jan... call for fire in the CFF facility...great.

6) 25-29 Jan... 554th has already been tasked to provide M16A2s... NCOA will make up the difference.

7) 25-29 Jan... key teaching point of Range 30D and 30N should be the distribution of fire...leaders need to coach on this range (my thought= we need to slow the range cadre down so we can deliberately show our folks what to do - avoid the "IET rush").

8) 25-29 Jan...let's try to throw an inert MICLIC box on top of an AVLB chassis so the troops get an idea of how they might see the MICLIC deployed.

9) 25-29 Jan...need to introduce our leaders to visences (sp?)...(bundles of PVC or steel pipe, 6-8" in diameter, used to breach ditches)... LTC Somerville's folks have a film showing the 3ID doing this at Hohenfels (my thought= is there some old material on post with which we can make a small visences?).

c. Administratively oriented thoughts

1) Field services during the 25-29 Jan STX period.

2) Should the platoons have T-shirts or (better) sweat shirts?...see if PX won't sponsor, or maybe AUSA.

3) Guidon...good. Mascot/logo?

4) Access to facilities and alcohol... general consensus was that the soldiers should be allowed access to on-post facilities... CSM recommended it be up to the squad

ldrs regarding consumption of alcohol... 1st Bde needs to make a ruling. (Additional thought: off-post passes?)

3. Closing thoughts

a. DPTM: "This may be the tip of the ice berg."

a. CG: a historical event; be thinking about how we do this for 27 squads (we'll have to do leader training simultaneously).


R. G. BUCK
LTC, EN
Commanding

DISTRIBUTION:

Cdr, 1st Bde
S3, 1st Bde
Cdr, Co D, 589th
S3, 589th
Cdr, 31st Engr Bn
Cdr, 35th Engr Bn

TNG DAY 1
 FRI
 10 JAN 91

| | | | |
|------------------------|-------------------------------|-------------------|--|
| . 1/2/3 PLT. 0430 | . MAKE UP | . .PSG | . 1/2/3 PLTS AS A CO GROUP |
| . 1/2/3 PLT. 0500-0600 | . PT (CIRCUIT/RUN) | . .15G | . .COC |
| . 1/2/3 PLT. 0600-0800 | . CHOW/HYGIENE & CLEANING | . .COC | . .COC |
| . C/31 GP .0800 | . ARRIVE (3/4/5 PLTS) | . .C/31 CADRE | . C/31 BRINGS SOLDIERS TO D/S09 BILLETS |
| . 1ST PLT .0800-UTC | . POM | . .AG | . 136TH BDE LRC, POC BILL SPURGEON |
| . 2ND PLT .0900-UTC | . POM | . .AG | . .AG |
| . 3RD PLT .1000-UTC | . POM | . .AG | . .AG POC CM4 CARTIER 6-5101 |
| . 4TH PLT .1100-UTC | . POM | . .AG | . .AG |
| . 5TH PLT .1200-UTC | . POM | . .AG | . .AG |
| . ALL .0800-1400 | . BANK ACCOUNTS/CHECK TO BANK | . .15G | . .AS AVAILABLE (MUST BE A CHECKING ACCOUNT) |
| . ALL .REMARKS | . COC SJA HILL & PDA BRIEFS | . .COC | . 5TH @ 1100, 1ST/2ND @ 1130, 3RD @ 1200, & 4TH 1300 |
| . SEL PERS .1300-2200 | . DRIVER TNG | . .MHC MP | . .MHC 589TH |
| . PLTS .1300-1700 | . CONMO TNG: | . .CTC CONMO AREA | . .CTC CONMO AREA |
| . . | . PUT PRC 77 INTO OPERATION | . . | . .M113 (20), HMMWV (5), 5 TON (5) |
| . . | . SEND/REC MESSAGE | . . | . .589 POC: SFC GARRISON 6-6639 |
| . . | . FAM. WITH AN/GRC 160, 46/7 | . . | . .4 BUILDINGS AVAILABLE, SPLIT ONE PLT BY 500 |
| . . | . EXPEDIENT ANTENNAS | . . | . .COORD. WITH MSG SUMERSELL, 6-7732/3231, BLDG 1948 |
| . . | . FIELD PHONES (TA1/312) | . . | . . |
| . . | . SOP LINE REPORTS | . . | . . |
| . ALL .1700-1900 | . CHOW | . .31ST MESS HALL | . .31ST MESS HALL |
| . LDERS .1700 | . OPNS/TNG MTNG | . .15G/CHDR | . .15G/CHDR |
| . LDERS .1830-2030 | . THREAT/NBC BRIEFS (S) | . .SCHOOL-TBO | . .MAJ LEACH .OPNS MUST COORD THRU BDE S-2 FOR CLEARANCE |
| . O CO (-) .1900-2100 | . THREAT/NBC BRIEFS (U) | . .MHC CLASSROOM | . .CPT THOMAS |

- RESOURCES
 INPROCESS
 ITEM

DRIVER TRAINING
 ITEM

QUANTITY

QUANTITY

| | | | |
|--|-----|----------------------|------------------|
| INFORMATION FORMS | 190 | M113 | 15 |
| WEAPON'S CARDS | 190 | S-TON | 5 |
| MASK CARDS | 190 | HMMWV | 5 |
| LINE | 190 | MOTOR POOL PERSONNEL | 2-3 PER VEH TYPE |
| TMP VEHICLE W/DRIVER | 1 | -10/PUBS | 20 |
| PACKING LIST | 190 | | |
| CASUALTY FEEDER REPORTS/ WITNESS STATEMENTS | 190 | | |

CONMO
 ITEM

QUANTITY

QUANTITY

LEADERS

| | | | |
|----------------------|------------|--------------------|---|
| PRC-77 W/ ACC KIT | 20 (CATEX) | THREAT TAPE/SLIDES | 1 |
| CEOT/AUTH TABLES | 10 (SLC) | NBC TAPE/SLIDE | 1 |
| TA-1/TA-312 | 20 (CTC) | | |
| WIRE, SPOONS, STAKES | (SLC) | | |
| SAPPER HANDBOOKS | 20 (SLC) | | |

DAY 2
SAT
19 JAN 91

| | | | | | |
|--|------------|---------------------------------|---------------------|------------|--|
| .ALL | .0430 | .WAKE-UP | . | . | . |
| .ALL | .0500-0600 | .PT (SPLIT-DRIVERS & D CO(-)) | .CUNINGHAM GYM .COC | . | .DRIVERS - HARD PT-156 D CO(-) - EASY PT |
| .ALL | .0600-0800 | .BREAKFAST/HYGIENE | . | . | .COC |
| .SEL PERS | .0730 | .DRAW WEAPONS | .C/589 SUPPLY .COC | . | .C/589 ARMORER HAVE ARMS RM OPEN AT 0715 |
| .SEL PERS | .0800-2200 | .DRIVER TNG | .N/A | . | .C/589 ARMORER OPEN ARMS RM AT 1715 |
| SIGNED TO DRIVERS AT COMPLETION OF DRIVERS TNG AND STATIONED AT D/589 BILLET (STONS TBD) | | | | | |
| .ALL | .0800-1200 | .1ST AID: | .CTC AREA | .CTC/COC | .4 BUILDINGS AVAILABLE, SPLIT ONE PLT BY SQU |
| . | . | .EVALUATE A CAS / PREVENT SHOCK | . | . | .COORD. WITH MSG SUPERSELL, 6-7732/3231, BLDG 1948 |
| . | . | .CLEAR OBJECT FROM THROAT | . | . | . |
| . | . | .MOUTH TO MOUTH / CPR | . | . | . |
| . | . | .DRESSINGS / TOURNQUET | . | . | . |
| . | . | .HEAD/CHEST/ABDOMINAL WOUND | . | . | . |
| . | . | .SPLINTS / LITTER | . | . | . |
| . | . | .MEDEVAC(SLD INSTRUCTOR) | . | . | . |
| .ALL | .1200-1300 | .LUNCH | .CTC AREA | .COC | .PV 1130 |
| .ALL | .1300-1700 | .500 LAND NAV (DEAD RECKONING) | .SLC LAND NAV | .STD & SQU | .1HR INSTRUCTION/CONCEPT AND 3 HR |
| .LDPS | .1700 | .OPNS/TNG MTNG | .ORDERLY RM | .1SG/CHOR | .PE BY SQU'S |
| .SEL PERS | .1730 | .APNS TURN-IN | .C/589 SUPPLY .COC | . | . |
| .ALL | .1700-1900 | .CHOW | .31ST MESS HALL.COC | . | .C/589 ARMORER OPEN ARMS RM AT 1715 |
| .ALL | .1900-2200 | .500/PLT TIME | .BLDGS 790-798 .COC | . | .C/589 ARMORER OPEN ARMS RM AT 1715 |
| . | . | . | . | . | .C/589 ARMORER OPEN ARMS RM AT 1715 |

- RESOURCES

DRIVER'S TRAINING:

| ITEM | QUANTITY | FIRST AID: ITEM | QUANTITY |
|----------------------|----------|-------------------------|----------|
| M113 | 15 | TRIANGULAR BANDAGES | 30 (CTC) |
| S-TON | 5 | SPLINTS | 30 (CTC) |
| MMMW | 5 | PRESSURE DRESSINGS | 30 (CTC) |
| MOTOR POOL PERSONNEL | 2-3 | CPR DUMMIES | 5 (CTC) |
| -10'S/PUBS | 20 | LITTERS | 5 (CTC) |
| | | 9-LINE MEDEVAC HANDOUTS | 20 (SLC) |

LAND NAVIGATION:

| ITEM | QUANTITY |
|--------------------|----------|
| MAPS, FLN 1/50,000 | 2 (SLC) |
| ANSWER SHEETS | 2 |
| SCORE SHEETS | 20 |
| COMPASS, LENSATIC | 25 |
| WHISTLES | 25 |
| CHEM LIGHTS | 25 |

DAY 3
SUN
20 JAN 91

| | | | | | |
|-----------|------------|--|--------------------------|--------------|------------------------------------|
| .ALL | .0730-1200 | .CHURCH SERVICES/FREE TIME | . | . | . |
| .ALL | .0700-0800 | .CHOW | .31ST MESS HALL. | . | .<0700> |
| .ALL | .1115 | .WEAPONS DRAM | .C/589 | .COC | .M16s ONLY |
| .ALL | .1200-1300 | .CHOW | .31ST MESS HALL. | . | .<1200> |
| .LDPS | .1300-1500 | .ID ENEMY WF; PROBE IOE & REC | .TA 206 LHM-1 | .DME | .CPT WARRACKIEWICZ 6-5585/774-5314 |
| .D CO (-) | .1300-1500 | .INDIVIDUAL MINES | .TA 206 LHM-2/3.CETC/COC | . | .48th MITT, DRAIN OF |
| . | . | .M14 & M19, M15, M16, M21 | . | . | .MINE KITS FROM TASC IF |
| .ALL | .1500-1800 | .PLT PES; RECON ENEMY MINEFIELD.TA 206 | .SOD LDPS | . | .IF NOT AVAILABLE |
| .LDPS | .1800 | .OPMS/TMG MTMG | .MESS HALL | .158/CHOR | . |
| . | .1800-1900 | .CHOW | .31ST MESS HALL. | . | .<1800> |
| .ALL | .1900 | .WEAPONS TURN-IN | .C/589 SUPPLY | . | .DCA INSTRUCTOR |
| .LDPS | .2000-2130 | .DESERT OPS/TN TAPE(DTE) | .BA CLASSROOM | .DCA | . |
| .D CO (-) | .2000-2100 | .DESERT OPS/TN TAPE(DTE) | .HMC CLASSROOM | .CPT THOMAS. | . |

- RESOURCES
LHM TRAINING:
ITEM

DESERT OPS/TRN:
ITEM

QUANTITY

QUANTITY

| | | | |
|------------|------------|---------|--------------------|
| M14, INERT | 125 (CETC) | TAPE | 1 DTE, MAJ PAULSON |
| M19, INERT | 125 (CETC) | TRAINER | 1 MAJ DOBBINS |
| M18, INERT | 125 (CETC) | | |
| M15, INERT | 125 (CETC) | | |
| M16, INERT | 125 (CETC) | | |
| M21, INERT | 125 (CETC) | | |

DAY 4

MON

21 JAN 91

| | | | | |
|------|------------|----------------------------------|------------------|------------|
| .ALL | .0400 | .WAKE UP | .C/589 SUPPLY | .COC |
| .ALL | .0415 | .WEAPONS ORDN | .C/589 SUPPLY | .COC |
| .ALL | .0440-0600 | .PT - FOOT MARCH (PLT BY PHASE) | .TBA | .BY PLTs |
| .ALL | .0600-0800 | .CHOW/HYGIENE | .31 MH, BARRACKS | .COC |
| .ALL | .0800-1200 | .INDIVIDUAL NBC: | .CTC AREA | .CTC/COC |
| . | . | .DON M17 PROTECTIVE MASK | . | . |
| . | . | .MOPP 1-4, DECONTAMINATE SKIN | . | . |
| . | . | .ID CASUALTY, SELF/BUDDY AID | . | . |
| .ALL | .1200-1300 | .CHOW | .CTC AREA | .CTC/COC |
| .ALL | .1300-1700 | .INDIVIDUAL NBC: | .CTC AREA | .CTC/COC |
| . | . | .N/8 N/9 PAPER, M256, DRINK FROM | . | . |
| . | . | .CANTEEN, MAINTAIN MASK(ETC) | . | . |
| .ALL | .1700-1900 | .CHOW | .31ST MESS HALL | .COC |
| .ALL | .1715 | .WEAPONS TURN-IN | .C/589 SUPPLY | .COC |
| .LDs | .1700 | .OPNS/TMG NTNG | .ORDERLY RM | .156/CMDR |
| .LDs | .1900-2000 | .BREACH OPNS & NTC BREACH FILM | .BN CLASSROOM | .DCR INSTR |
| .ALL | .2000-2200 | .PLT/500 TIME | .BLDG 790-798 | .COC |

- RESOURCES

PT FOOTMARCH:

ITEM

QUANTITY

NBC:

ITEM

QUANTITY

M16

190

TMP VEHICLE

1

5-GAL WATER JUG

10

MEDIC

1 (SLC)

BREACHING FILM (LDs + ALL):

ITEM

QUANTITY

FILM

1

TRAINER

1

190

190

190

20

190

7

25

190

DAY 5
TUES
22 JAN 91

| | | | | |
|-----------|------------|---|---|--|
| .ALL | .0430 | .WAKE UP | .COC | |
| .ALL | .0500-0600 | .PT-PU/SU, NBC VOLLYBALL | .CUNINGHAM GYM .COC | |
| .ALL | .0600-0800 | .CHOW/HYGIENE | .31ST MESS HALL.COC | <0640> |
| .ALL | .0800-1200 | .500 VEHICLE OPS-M113 .RECOVERY, TRACK MAINT, PHCS .UTISUAL SIGNALS .PULL PACK | .MHC, 589th .MP/500 LDR.<589 POC,SFC GARRISON 6-6639> | |
| .ALL | .1200-1300 | .CHOW | .31ST MESS HALL.COC | <1140> |
| .D/31 GP | .1300-1630 | .REHEARSAL | .D/31 AREA .D/31 GP | |
| .D CO (-) | .1300-1700 | .500/PLT NBC TH TNG .HOPP GEAR EXCHANGE .VEHICLE WASHDOWN .OPERATOR SPRAYDOWN | .SLO AREA .COC/S4E .65 GPH PUMP NEEDED FOR DECON .558 KRAHNER.6-6418 .NBC SCHOOL. | |
| .D CO (-) | .1700-1900 | .CHOW | .31ST MESS HALL.COC | <1800> |
| .LDRS | .1700 | .OPMS/TNG MTNG | .ORDERLY RM .158/CHDR | |
| .D CO (-) | .1900-2100 | .CREW SERVED MPMS CLASSES: .RANGE CARDS (M2/M60) .MSS/DISSASS (M2/M60) | .BLDOS 790-798 .COC | .MPMS T/I AT C/589 SUPPLY AT 2115 |
| .LDRS | .1900-2100 | .CONVO TNG: .CEDI; ENCODE/DECODE MSB .VINSON/KV57 | .SLO .31V | .902ND, 2XUHHW's WITH VINSON'S OPERATIONAL |

- RESOURCES

SQUAD VEHICLE OPERATIONS:

| ITEM | QUANTITY | NBC: ITEM | QUANTITY |
|---------------------|----------|---------------------|----------|
| M113 | 15 | M256 KITS | 25 |
| MOTOR POOL TRAINERS | 5 | M8/M9 PAPER | 25 |
| -10/PUBS | 20 | M8A1 CHEMICAL ALARM | 5 |
| TOOLS | 7 | M-11 DECON APP | 20 |
| | | NBC GTA'S | 25 |

CREW SERVED WEAPONS CLASSES:

| ITEM | QUANTITY |
|-------------|----------|
| RANGE CARDS | 25+ |
| FM'S/TM'S | 25 |
| M-60 | 5 |
| M-2 | 5 |

DAY 6
WED
23 JAN 91

| | | | | | |
|----------|------------|---|-----------------|------------|--|
| .ALL | .0430 | .WAKE UP | . | .COC | . |
| .ALL | .0500-0600 | .PLT PT (CIRCLE PT W/INDIAN RUN, CUNNINGHAM GYM | . | . | . |
| .ALL | .0715 | .MPMS DRAM | .C/S89 SUPPLY | .COC | . |
| .ALL | .0600-0800 | .CHON | .31ST MESS HALL | .COC | .COC |
| .1/2 AM | .0800-1700 | .U.S. WEAPONS: | .RG 19 | .CTC/COC | .0715 TRANS |
| .1/2 PM | . | .ASS/OIS M60 | . | . | .HIP POCKET TNG TIME AVAILABLE |
| . | . | .AT4 | . | . | .50 RNDOS PER SOLDIER, M60 |
| . | . | .M203 | . | . | .5 PRACTICE AT4 PER SOLDIER |
| . | . | .LIVE FIRE FAMILIARIZATIONS | . | . | .1 LIVE AT4 PER SN |
| .ALL | .1200-1300 | .CHON ON RG 19 | .RG 19 | .COC | .P/U AT 1130 FOR MERNITE |
| .1/2 AM | .0800-1700 | .M2, 50 CAL. FAMILIARIZATION | .CEV RANGE | .12F/COC | .NEED MPMS & SNE's |
| .1/2 PM | . | . | . | . | . |
| .ALL | .1700-1900 | .CHON | .31ST MESS HALL | . | .C1820D |
| .LDRS | .1700 | .OPMS/TNG NTNG | .ORDERLY RM | .15G/CHDR | . |
| .LDRS | .1930-2100 | .EMGR LDR & STAFF ESTIMATE | .TBD | .DCR-INSTR | .BRINGING FILM OF FASCINES TO PROP OFF FOR VIEWING |
| .D CO(-) | .1900-2100 | .MPMS CLEANING | .BLDGS 790-798 | .COC | .2100 MPMS T/I |

- RESOURCES

U.S. WEAPON'S RANGE:

| ITEM | QUANTITY | DODAC |
|-----------------------|---------------|-------|
| .50 CAL BALL AMMO | 5,000 ROUNDS | A555 |
| 7.62 BALL AMMO | 10,000 ROUNDS | A131 |
| AT4 | 165 | C995 |
| M-203 | 30 | B519 |
| 40MM AMMO, PRACTICE | 160 | B546 |
| 40MM AMMO, HE | 32 | |
| WEAPONS CLEANING KITS | 30 | |
| M2, .50 CAL | 15 | |
| SUBJECT MATTER EXPERT | 1 | |

DAY 7

THURS

24 JAN 91

| | | | | |
|-----------|------------|----------------------------------|-----------------|----------------|
| .ALL | .0430 | .WAKE UP | .COC | |
| .ALL | .0500-0600 | .PT - COMBATIVES | .CUNNINGHAM GYM | .STD 589th |
| .ALL | .0645 | .MPMS DRAM | .C/S89 SUPPLY | .COC |
| .ALL | .0600-0800 | .CHOW/HYGIENE | .31ST MESS HALL | .COC |
| .D/31 GP | .0800-2400 | .GRADUATION AND PRESS | .D/31ST AREA | .D/31 COC |
| .LDRS | .0800-1200 | .CALL FOR FIRE | .TRAINER | .DPTH |
| .PSG & PL | | .CONTROL FIRE | | |
| .CO(-) | .0800-1200 | .MOVEMENT TECHNIQUES-DISHMOUNTED | .TBR | |
| | | .INDIVIDUAL, SQUAD | .SL | |
| .ALL | .1200-1300 | .CHOW | .SLD | .COC |
| .ALL | .1300-1700 | .MOVEMENT TECHNIQUES-MOUNTED | .TBR | .COC |
| | | .DRILLS | | |
| .ALL | .1700-1900 | .CHOW | .31ST MESS HALL | .COC |
| | | | | .<1740> |
| .LDRS | .1700 | .OPMS/TMG NTMG | .ORDERLY RM | .1SG/CHOR |
| .ALL | .1715 | .MPMS TURN-IN | .C/S89 SUPPLY | .COC |
| .ALL | .1900-2200 | .IR/NIGHT DRIVING | .TBO | .COC |
| | | .PREP FOR FIELD PROBLEM | | |
| | | | | .NEED SNE-12F? |

- RESOURCES

PT - COMBATIVES:

| | | |
|-----------------------------------|---------------|--|
| ITEM | QUANTITY | |
| INSTRUCTOR | 5 | |
| MOVEMENT TECHNIQUES - DISMOUNTED: | QUANTITY | |
| ITEM | QUANTITY | |
| M16A1 | 190 | |
| LEADER TRAINING - CALL FOR FIRE: | QUANTITY | |
| ITEM | QUANTITY | |
| INSTRUCTOR | 1 (SFC LIPPS) | |
| TSFO | 1 | |

| | |
|--------------------------------|----------|
| MOUNTAIN TECHNIQUES - MOUNTED: | |
| ITEM | QUANTITY |
| M113 | 15 |
| MUNAW (CONTROL) | 1 |
| M2 | 15 |
| MAG'S | 15 |

| | | | | | |
|-----------|-----------|------------|-------------------------------|--------------|--|
| FRI | .1ST PLT | .0800-1000 | .ZERO M16 | .RG 5 | |
| 25 JAN 91 | | .1000-1200 | .FIELD FIRE | .RG 1 | |
| STX DAY 1 | | .1530-2100 | .30 DAY & NIGHT | .RG 300/M | |
| | .2ND PLT | | .DEMO RANGE | .RG 33 | .CETC |
| | | .0700-0800 | .INERT DEMO TRAINING | .CLASS | .TET TRAINING REVIEW |
| | | .0800-1000 | .LIVE DEMO LT RG | .LT RANGE | .CDC/CETC |
| | | .1000-1130 | .LIVE MINE DEMONSTRATION | .MAY RANGE | .DME/CETC |
| | .1/2 FLIP | .1200-1430 | .LIVE DEMO MV RG | .MAY RANGE | .CDC |
| | .1/2 FLIP | .1430-1700 | .LIVE MINE TRAINING | .ASSLT RANGE | .DME/CETC |
| | .3RD PLT | | .ROM NINE FIELD (TRACKED) | | |
| | | .RM/PH | .PREP/PRACTICE | | |
| | | .1500-2400 | .EXECUTES MISSION | .ROUBIDOUX | .OBSTACLE RECONS INCLUDED DISMOUNTED NIGHT |
| | | | | .VALLEY | .MOVEMENT OFFOR AND MILES; RESOURCES |
| | .4TH PLT | | .BREACH ENEMY OBSTACLE SYSTEM | | |
| | | .RM/PH | .PREP/PRACTICE | | .ACE AND AVALB |
| | | .1500-2000 | .EXECUTES MISSION | .ROUBIDOUX | |
| | | | | .BREACH 1 | |
| | .5TH PLT | | .BREACH ENEMY OBSTACLE SYSTEM | | |
| | | .RM/PH | .PREP/PRACTICE | .ROUBIDOUX | .ACE AND AVALB |
| | | .1500-2000 | .EXECUTES MISSION | .BREACH 2 | |

NOTES:

1. COMPANY TOC WILL RUN OUT OF BUILDING # 794.
2. PLATOON/SQUAD WILL RUN BY LINE REPORTS WITH COMPANY TOC.
3. PLATOONS WILL BIVOUAC TWO NIGHTS, NOT CONSECUTIVE.
4. PLATOONS NOT ON BIVOUAC WILL CONDUCT PHYSICAL READINESS TRAINING AT NIGHT.
5. BIVOUACS AS PLATOON WITH FIRE PLANS, SECTOR SKETCH, LAND LINE, GUARD POST, TOC IN FIELD - COMPANY RUN OFFOR. RUN CASUALTY CARDS.
6. INTERACTIVE MISSIONS: MEDEVAC - SUPPORTED BY UN-1 NBC ATTK AND HOPP EXCHANGE. BIVOUAC MOVES. OFFOR ATTACKS.
7. RATIONS:

| | | | | | |
|-----|------|---|---|----------|----------|
| | B | L | D | A-RATION | - TR-206 |
| 1ST | 0520 | C | C | | |
| 2ND | 0520 | C | C | | |
| 3RD | 0520 | A | C | | |
| 4TH | 0520 | A | C | | |
| 5TH | 0520 | A | C | | |
8. BIVOUAC - TR-246 2ND, 3RD, 5TH PLATOONS

| | | | | | |
|-----------|-----------|------------|-------------------------------|--------------|--|
| SUN | .3RD PLT | .0800-1000 | .ZERO M16 | .RG 5 | . |
| 27 JAN 91 | . | .1000-1200 | .FIELD FIRE | .RG 1 | . |
| STX DAY 3 | . | .1530-2100 | .30 DAY & NIGHT | .RG 30 D/M | . |
| . | .4TH PLT | . | .DEMO RANGE | .RG 33 | . |
| . | . | .0700-0800 | .INERT DEMO TRAINING | . | .TET TRAINING |
| . | . | .0800-1000 | .LIVE DEMO LT RG | . | . |
| . | . | .1000-1130 | .LIVE DEMO MV RG | . | . |
| . | .1/2 FLIP | .1200-1430 | .LIVE DEMO MV RG | .HUY RANGE | .COC |
| . | .1/2 FLIP | .1430-1700 | .LIVE MINE TRAINING | .ASSLT RANGE | .DNE/CETC |
| . | .5TH PLT | . | .ROW MINE FIELD (TRACKED) | . | . |
| . | . | .RM/PH | .PREP/PRACTICE | . | . |
| . | . | .1900-2400 | .EXECUTES MISSION | .ROUBIDOUX | .OBSTACLE RECONS INCLUDED DISMOUNTED NIGHT |
| . | . | . | . | .VALLEY | .MOVEMENT OPFOR AND MILES; RESOURCES |
| . | .1ST PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| . | . | .RM/PH | .PREP/PRACTICE | . | .ACE AND AVL/B |
| . | . | .1500-2000 | .EXECUTES MISSION | .ROUBIDOUX | . |
| . | . | . | . | .BREACH 1 | . |
| . | .2ND PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| . | . | .RM/PH | .PREP/PRACTICE | .ROUBIDOUX | .ACE AND AVL/B |
| . | . | .1500-2000 | .EXECUTES MISSION | .BREACH 2 | . |
| . | . | . | . | . | . |

NOTES:

1. COMPANY TOC WILL RUN OUT OF BUILDING # 794.
2. PLATOON/SQUAD WILL RUN BY LINE REPORTS WITH COMPANY TOC.
3. PLATOON WILL BIVOUAC TWO NIGHTS, NOT CONSECUTIVE.
4. PLATOONS NOT ON BIVOUAC WILL CONDUCT PHYSICAL READINESS TRAINING AT NIGHT.
5. BIVOUACS AS PLATOON WITH FIRE PLANS, SECTOR SKETCH, LAND LINE, GUARD POST, TOC IN FIELD - COMPANY RUN OPFOR. RUN CASUALTY CARDS.
6. INTERACTIVE MISSIONS: MEDEVAC - SUPPORTED BY UH-1 HBC ATTK AND MOPP EXCHANGE. BIVOUAC MOVES. OPFOR ATTACKS.

7. RATIONS:

| | | | | |
|-----|------|---|---|-------------------|
| | B | L | D | A-RATION - TA-206 |
| 1ST | C | A | C | |
| 2ND | 0600 | A | C | |
| 3RD | 0600 | C | C | |
| 4TH | C | C | C | |
| 5TH | 0600 | A | C | |

8. BIVOUAC - TA-246 5TH PLATOON

| | | | | | |
|-----------|-----------|------------|-------------------------------|------------|--|
| MON | .4TH PLT | .0800-1000 | .ZERO M16 | .RG 6 | .COMPANY RUN RANGE |
| 28 JAN 91 | . | .1000-1200 | .FIELD FIRE | .RG 1 | . |
| STX DMY 4 | . | .1530-2100 | .30 DAY & NIGHT | .RG 30 D/N | . |
| . | .5TH PLT | . | .DEMO RANGE | .RG 33 | . |
| . | . | .0700-0800 | .INERT DEMO TRAINING | . | .TET TRAINING |
| . | . | .0800-1000 | .LIVE DEMO LT RG | . | . |
| . | .1/2 FLIP | .1000-1130 | .LIVE DEMO MV RG | . | . |
| . | .1/2 FLIP | .1200-1430 | .LIVE DEMO NV RG | .COC | .SPLIT PLT FOR LIVE MINES AND HUY DEMO |
| . | . | .1430-1700 | .LIVE MINE TRAINING | .DNE/CETC | .AND DO A FLIP FLOP |
| . | .1ST PLT | . | .ROM NINE FIELD (TRACKED) | . | . |
| . | . | .AM/PH | .PREP/PRACTICE | . | . |
| . | . | .1900-2400 | .EXECUTES MISSION | .ROUBIDOUX | .OBSTACLE RECONS INCLUDED DISMOUNTED NIGHT |
| . | . | . | . | .VALLEY | .MOVEMENT OPFOR AND MILES; RESOURCES |
| . | .2ND PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| . | . | .AM/PH | .PREP/PRACTICE | . | .ACE AND AVL B |
| . | . | .1500-2000 | .EXECUTES MISSION | .ROUBIDOUX | . |
| . | . | . | . | .BREACH 1 | . |
| . | .3RD PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| . | . | .AM/PH | .PREP/PRACTICE | .ROUBIDOUX | .ACE AND AVL B |
| . | . | .1900-2000 | .EXECUTES MISSION | .BREACH 2 | . |
| . | . | . | . | . | . |

NOTES:

1. COMPANY TOC WILL RUN OUT OF BUILDING 8 794.
2. PLATOON/SQUAD WILL RUN BY LINE REPORTS WITH COMPANY TOC.
3. PLATOON WILL BIVOUAC TWO NIGHTS, NOT CONSECUTIVE.
4. PLATOONS NOT ON BIVOUAC WILL CONDUCT PHYSICAL READINESS TRAINING AT NIGHT.
5. BIVOUACS AS PLATOON WITH FIRE PLANS, SECTOR SKETCH, LAND LINE, GUARD POST.
6. TOC IN FIELD - COMPANY RUN OPFOR. RUN CASUALTY CARDS.
7. INTERACTIVE MISSIONS: NEDEVAC - SUPPORTED BY UH-1 HBC ATTK AND MOPP EXCHANGE. BIVOUAC MOVES. OPFOR ATTACKS.

7. RATIONS:

| | | | | |
|-----|------|---|---|-------------------|
| | B | L | D | A-RATION - TA-206 |
| 1ST | 0600 | A | C | |
| 2ND | 0600 | A | C | |
| 3RD | 0600 | A | C | |
| 4TH | 0600 | C | C | |
| 5TH | C | C | C | |

8. BIVOUAC - TA-246 1ST, 2ND, 3RD, 4TH PLATOONS

| | | | | | |
|-----------|-----------|------------|-------------------------------|-------------|--|
| 1UE | .5TH PLT | .0800-1000 | .ZERO M16 | .RG 6 | .COMPANY RUN RANGE |
| 29 JAN 91 | . | .1000-1200 | .FIELD FIRE | .RG 8 | . |
| STX DAY 5 | . | .1530-2100 | .30 DAY & NIGHT | .RG 30 D/N | . |
| | .1ST PLT | . | .DEMO RANGE | .RG 33 | .YET TRAINING |
| | . | .0700-0800 | .INERT DEMO TRAINING | . | . |
| | . | .0800-1000 | .LIVE DEMO LT RG | . | . |
| | . | .1000-1130 | .LIVE DEMO MV RG | . | . |
| | .1/2 FLIP | .1200-1430 | .LIVE DEMO MV RG | .HVV RANGE | .SPLIT PLT FOR LIVE MINES AND HVV DEMO |
| | .1/2 FLIP | .1430-1700 | .LIVE MINE TRAINING | .ASLT RANGE | .AND DO A FLIP FLOP |
| | . | . | . | .COC | . |
| | .2ND PLT | . | .ROW MINE FIELD (TRACKED) | .DME/CETC | . |
| | . | .AM/PM | .PREP/PRACTICE | . | . |
| | . | .1900-2400 | .EXECUTES MISSION | .ROUBIDOUX | .OBSTACLE RECONS INCLUDED DISMOUNTED NIGHT |
| | . | . | . | .VALLEY | .MOVEMENT OPFOR AND MILES; RESOURCES |
| | .3RD PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| | . | .AM/PM | .PREP/PRACTICE | . | .ACE AND AVL8 |
| | . | .1500-2000 | .EXECUTES MISSION | .ROUBIDOUX | . |
| | . | . | . | .BREACH 1 | . |
| | .4TH PLT | . | .BREACH ENEMY OBSTACLE SYSTEM | . | . |
| | . | .AM/PM | .PREP/PRACTICE | .ROUBIDOUX | .ACE AND AVL8 |
| | . | .1500-2000 | .EXECUTES MISSION | .BREACH 2 | . |
| | . | . | . | . | . |

NOTES:

1. COMPANY TOC WILL RUN OUT OF BUILDING # 794.
2. PLATOON/SQUAD WILL RUN BY LINE REPORTS WITH COMPANY TOC.
3. PLATOON WILL BIVOUAC TWO NIGHTS, NOT CONSECUTIVE.
4. PLATOONS NOT ON BIVOUAC WILL CONDUCT PHYSICAL READINESS TRAINING AT NIGHT.
5. BIVOUACS AS PLATOON WITH FIRE PLANS, SECTOR SKETCH, LAND LINE, GUARD POST.
TOC IN FIELD - COMPANY RUN OPFOR. RUN CASUALTY CARDS.
6. INTERACTIVE MISSIONS: NEDEVAC - SUPPORTED BY UH-1 NBC ATTK AND MOPP
EXCHANGE. BIVOUAC MOVES. OPFOR ATTACKS.
7. RATIONS:

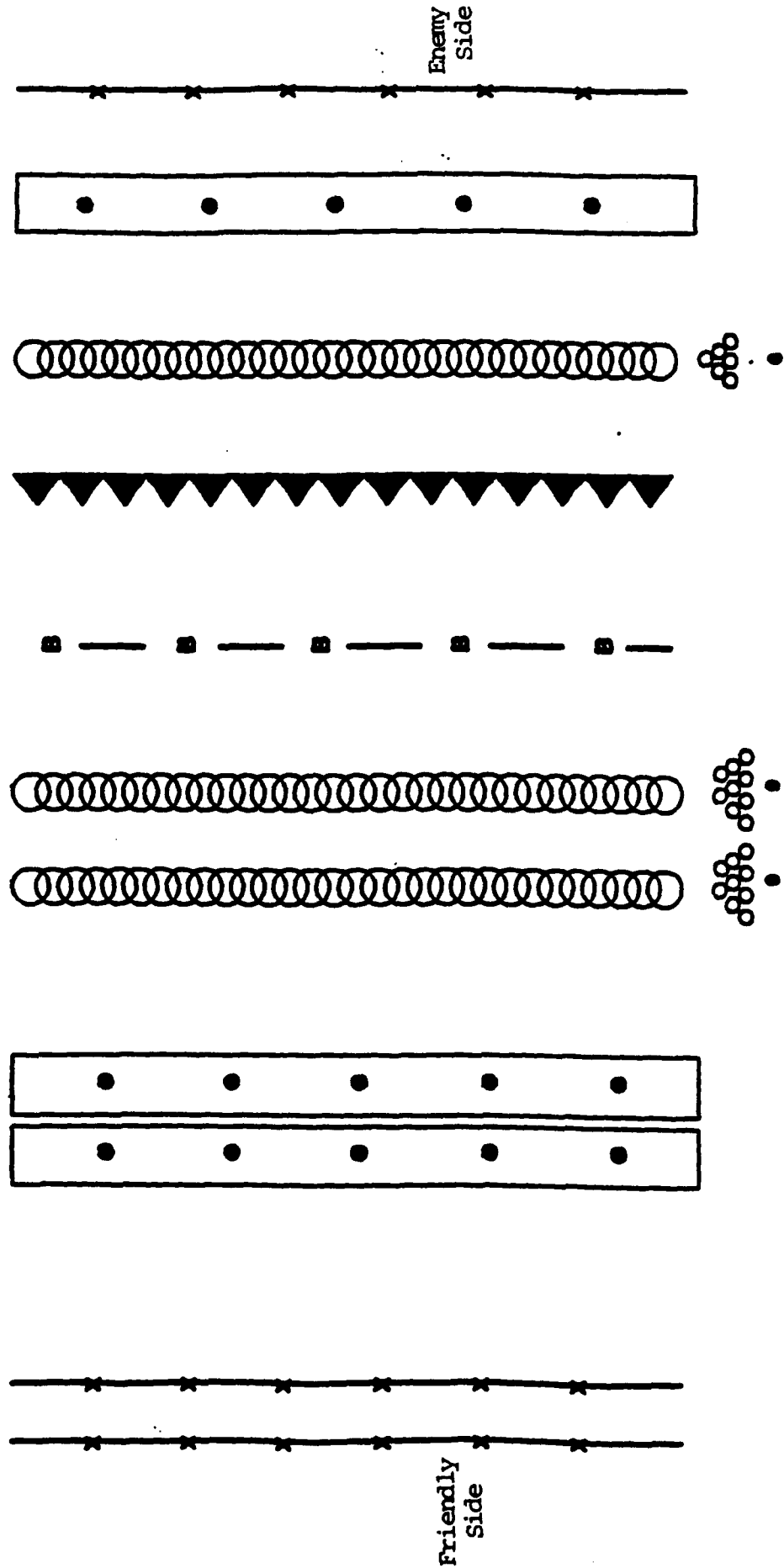
| | | | | |
|-----|------|---|---|-------------------|
| | B | L | D | A-RATION - TA-206 |
| 1ST | C | C | C | |
| 2ND | C | A | C | |
| 3RD | C | A | C | |
| 4TH | C | A | C | |
| 5TH | 0620 | C | C | |

| BRN | DEMO RANGE. | ROW MINE | BREACH |
|-------|-------------|---------------|------------------|
| M16A2 | DEMO KITS | DUMMY MINES | .CEV |
| | . | M15 | .AULB |
| | . | M21 | .SANDBAGS |
| | . | M16 | .SAD PIONEER |
| | . | M14 | .ENGR TAPE |
| | . | ENGINEER TAPE | .MARKING KIT |
| | . | DA 1355 | .CONCERTINA |
| | . | WAPS, FLW | .PICKETS |
| | . | | .BARB WIRE |
| | . | | .PICKET DRIVER |
| | . | | .INERT DEMO BLK |
| | . | | .DEY CORD |
| | . | | .TIME FUSE |
| | . | | .CAPS, NON-ELEC. |
| | . | | .M60 FUSE IGNIT. |
| | . | | .GRAPPLING HOOK. |
| | . | | .ROPE |
| | . | | .DEMO KITS |
| | . | | .WIRE GLOVES |
| | . | | .RADIOS |
| | . | | .WEAPONS |
| | . | | .GAS GUNS |
| | . | | .M2'S |
| | . | | .WAPS, FLW |
| | . | | .M113'S |

| BOM | | QTY | DDARC | BENCH | | QTY | DDARC |
|----------------------|------------|-----|-------|-------------------|--|-----------|-------|
| M16A2 | 32,000 RDS | | A071 | | | | |
| 5.56 BALL | 2,500 RDS | | A060 | | | | |
| 5.56 TRACER | | | | | | | |
| WHITE PARA FLARE | 45 | | L312 | | | | |
| DEMO AT RANGE 33 | | QTY | DDARC | BENCH | | QTY | DDARC |
| M15 MINE | 10 | | K180 | DET CORD | | 12,000' | M456 |
| M21 MINE | 10 | | K181 | CAP. NON-ELECTRIC | | 300 | M131 |
| DET CORD | 12,000' | | M456 | TIME FUSE | | 1,350' | M670 |
| CAP. NON-ELECT | 900 | | M131 | IGNITER, M60 | | 150 | M766 |
| TIME FUSE | 1,350' | | M670 | | | | |
| C-4, M112 | 120 | | M023 | 5.56 BLANK | | 5,000 RDS | A080 |
| TNT, 1/4 POUND | 440 | | | 7.62 BLANK | | 1,000 RDS | A111 |
| SHRAP. CHARGE, 15 LB | 15 | | M420 | SMOKE, HAND | | | |
| SHRAP. CHARGE, 40 LB | 15 | | M421 | GREEN | | 30 | G940 |
| CATER CHARGE, 40 LB | 15 | | M039 | YELLOW | | 30 | G945 |
| BANGALORE KIT | 15 | | M028 | VIOLET | | 30 | G955 |
| IGNITER, M60 | 820 | | M766 | RED | | 15 | G950 |
| M10 CLAYMORE | 15 | | K145 | SMOKE POT, M1 | | 10 | K866 |
| TNT, 1 POUND | 20 | | M032 | SIN, HAND GRENADE | | 100 | L601 |
| CAP. ELECTRIC | 288 | | M130 | | | | |

TEAM BUILDER CHALLENGE

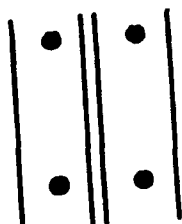
APPENDIX F



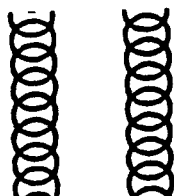
Legend-- Team Builder Challenge



Two belts of five-strand barbed wire "cattle fence"



Two belts of surface-laid AT mines; three rows per belt



Two belts of nine-roll concertina (X-section shown on diagram)



10' high berm (spoil from ditch)



Square-cut ditch... 15' wide by 9' deep



One belt of six-roll concertina



One belt of surface laid AT mines



One five-strand barbed wire fence

ENDNOTES

1. Joseph S. Nye, Jr. and Roger K. Smith, After the Storm-- Lessons Learned from the Gulf War (New York: Madison Books, 1992), 323.

2. ARCENT Personnel Command, Operations Desert Shield/ Desert Storm After Action Review, (Riyadh, Saudi Arabia, 19 August 1991).

3. Department of the Army, Leadership and Command at Senior Levels, Field Manual 22-103 (Washington: U.S. Department of the Army, 21 June 1987), 82.

4. Dick Cheney, Conduct of the Persian Gulf War, Final report to Congress pursuant to Title V of Public Law 102-25 (Washington: U.S. Department of Defense, April 1992), D-9.

5. Frederick M. Franks, Jr., Desert Storm Conference Report (Fort Monroe, Virginia: U.S. Department of the Army Training and Doctrine Command, 3 March 1992), 8.

6. Department of the Army, Getting to the Desert, CALL Newsletter No. 90-11 (Fort Leavenworth, Kansas: U.S. Department of the Army Center for Army Lessons Learned, December 1990), 19.

7. Deputy Assistant Commandant Henry S. Miller, Jr., "Impact of Operation Desert Storm Lessons Learned on TRADOC," memorandum for Commander, TRADOC, Fort Leonard Wood, Missouri, 21 February 1992.

8. Department of the Army, The Yellow Ribbon, CALL Newsletter No. 91-2 (Fort Leavenworth, Kansas: U.S. Department of the Army Center for Army Lessons Learned, June 1991), 9.

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- Miller, Henry S., Jr., Deputy Assistant Commandant. "Impact of Operation Desert Storm Lessons Learned on TRADOC." Memorandum for Commander, TRADOC. Fort Leonard Wood, Missouri, 21 February 1992.
- Nye, Joseph S., Jr., and Roger K. Smith, After the Storm-- Lessons from the Gulf War. New York: Madison Books, 1992.
- U.S. Department of the Army. Leadership and Command at Senior Levels. Field Manual 22-103. Washington: U.S. Department of the Army, 21 June 1987.
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